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THE HEALTH
AND HEALTH SERVICES
OF THE CITY OF
CAMBRIDGE
IN
1963

BEING THE ANNUAL REPORT OF
THE MEDICAL OFFICER OF HEALTH
*including the School Health Service, Chief Public
Health Inspector's and other reports*

The real approach of the Medical Officer of Health to all health problems follows a fairly uniform pattern. First, he gets his information; secondly, he endeavours from that to state the problem; thirdly, he endeavours to see whether the problem can be modified by fiddling with any of its factors (Dr. Burn, of Salford, calls this "manipulating the environment"); and fourthly, having done all this, he recommends a course of action—if he can.

I. C. Monro, County Medical Officer of Lanarkshire

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DEPARTMENT OF PUBLIC HEALTH,
 KETT HOUSE,
 STATION ROAD,
 CAMBRIDGE.

(Telephone Cambridge 58977)

July, 1964.

To the Mayor, Aldermen and Councillors of the City of Cambridge.

MR. MAYOR, LADIES AND GENTLEMEN,

We began the New Year in new offices at Kett House, having moved the entire department from the Guildhall, in deep snow and bitter cold, during the last few days of 1962. For the first time the various sections of the department were arranged in logical relationship so that those who needed to work together could be in the same or in adjacent rooms as circumstances demanded, and sections could be satisfactorily grouped together in different parts of the building. Apart from the obvious gain in efficiency which this brought about there was also the stimulus of working in new and attractive surroundings. Some people, such as the district nurses and midwives, were brought in from outlying centres and worked alongside the rest of the staff for the first time and, for my part, I became personally acquainted with members of my staff whom, previously, I had rarely met. Some members of the staff, such as Assistant Medical Officers, had never had a room before, nor had we ever had any private place for doctors and nurses to interview the public. We were even able to have a waiting room so that callers need no longer hang about in a dark

dassage and a small surgery was provided where patients could be seen without the necessity for sending them to a distant clinic and despatching a doctor and nurse to be in attendance.

The Mental Health Service is one of the functions delegated from the County to the City but both the Authorities have been making use of the Cambridgeshire Mental Welfare Association as their agents in this work. For various reasons the Association came to the conclusion that, for the better future development of the mental welfare services, it would be advisable for the County Council to resume its direct authority. This was done on June 1st 1963 and the City Council was asked to exercise its powers under the Scheme of Delegation of Health and Welfare Functions. It was considered undesirable to break up the organisation which was taken over from the voluntary Association and so the entire professional and administrative staff were left undisturbed in their existing offices. The two mental welfare officers, whose work had lain in the City were, however, taken on to the establishment of my department but they continue to work as a team with their fellows in the County area.

For many years we have relied upon Mr. G. Wright, consultant ophthalmologist, for testing the vision of children at our clinics and prescribing spectacles and other treatment. I have long felt it desirable to have some sorting out of cases so that not all need be put on the inevitable waiting list to see the consultant, and I have also felt that supervision, after the consultant has prescribed, might very well be done without making more demands upon his time. Re-arrangement of the duties of the medical staff of the department enabled me to make use of the experience of Dr. Nicholls in ophthalmic work and, after taking a refresher course, she was able to take over much of the routine eye work amongst school children.

For some years we have given increasing attention to the early detection and treatment of hearing defects and, during 1963, Addenbrooke's Hospital started an audiology clinic twice a month for seeing children referred by this department and where our own medical staff can attend for consultations.

After being without an infant welfare clinic in the Chesterton area for some years we were able to open again in the new premises of the St. Raphael Club. Our home teachers of the blind and disabled have also given regular assistance at a class run by this club for their members.

1963 was the centenary anniversary of the first attempt to secure clean air: the first Alkali Act having been passed in 1863. The hundredth annual report of the Chief Alkali Inspector contrasts the disregard of black smoke emission in the nineteenth century with present day anti-pollution methods sometimes costing millions of pounds at a single industrial plant.

I continue to be concerned at the lack of time which my senior officers and myself have for reading and thinking and I find that my concern is shared by other Medical Officers of Health judging from what they say in their annual reports and at meetings when I hear them speak. I am concerned with about 100 regular meetings a year and a large number of special ones which crop up from time to time. Apart from the time taken in attending a meeting (whether I go myself or am represented by someone else) often two or three times as long is spent in preparing matter which may be necessary for the meeting. Government departments issue an unending stream of statutory instruments, and reports on medicine, biology and other subjects on which I ought to be well informed, appear in journals over the whole world once in every five minutes throughout the twenty-four hours (according to a calculation made by one of the United Nations agencies).

My file of papers on the fluoridation of water supplies weighs $2\frac{3}{4}$ lbs., those upon radiation weigh 10 lbs. and those on many other subjects are just as bulky. On all these topics I ought to be sufficiently well-informed to be able to give sensible and considered advice to the Council when required but, like other Medical Officers of Health, I am constantly defeated by the limits of the 24 hour day. I have notes on many useful schemes which I should like to develop and improvements which I should like to make in the running of the department but all senior local government officers' time is so largely taken up with the minutiae of the daily routine that each day leaves a feeling of dissatisfaction with a job scrambled through rather than properly done. There comes a limit to the amount of overtime that can be worked or the amount of work which can be taken home and, although I see no immediate remedy for these ills, I draw attention to them because I think that the entire system throughout the country will eventually break down unless the rate of legislation can be slowed, the spate of out-of-date and unnecessary activities can be curbed and much more attention paid to the importance of reading, digesting, thinking and planning.

I would like to acknowledge the hard work done throughout the year by all my staff with little regard to a fixed hour of going home and, in particular, by my deputy, Dr. Patterson, my Chief Inspector, Mr. Edwards, and my Administrative Assistant, Mr. Mitton. I should also like to pay tribute to the untiring efforts of my secretary, Miss Smith, who enables me to get through far more work in a day than I could ever accomplish unaided.

I have the honour to be,

Mr. Mayor, Ladies and Gentlemen,

Your obedient servant,

CYRIL G. EASTWOOD,

*Medical Officer of Health and
Principal School Medical Officer.*

PART I
ORGANIZATION
AND
ADMINISTRATION

SECTION 1. THE COMMITTEES MOST CONCERNED WITH THE WORK OF THE DEPARTMENT

PUBLIC HEALTH COMMITTEE (1963-64)

THE MAYOR, Councillor J. B. COLLINS

Chairman : Alderman C. E. RIDGEON

Members : Aldermen HALNAN (*Vice-Chairman*), JACKSON, Councillors Mrs. ABRAMS, COLE, Mrs. CULVERWELL, GINN, Miss HOWLETT, Dr. LOWINGS and SCURFIELD.

WELFARE SERVICES COMMITTEE (1963-64)

Chairman : Alderman MALLETT.

The MAYOR.	Councillor JOHNSTON.
Alderman HALNAN.	Councillor Mrs. KALDOR.
Councillor Mrs. BARKER.	Councillor Mrs. TWEED.
Councillor Mrs. BURN.	Councillor Mrs. MORSE (<i>Vice-Chairman</i>).
Councillor COLE.	Councillor TRAYLEN.
Councillor GILL.	

COMMITTEE FOR EDUCATION (1963-64)

Chairman : Alderman G. F. HICKSON.

The MAYOR.	County Alderman Mrs. PARSONS.
Alderman AMEY.	Councillor Professor JENNINGS.
Alderman MALLETT.	Councillor Mrs. MORSE.
Alderman MOLE (<i>Vice-Chairman</i>).	Councillor SALTER.
Alderman RIDGEON.	Dr. R. F. RATTRAY.
Councillor Mrs. ABRAMS.	Mrs. J. SALTER.
Councillor ASH.	Miss A. H. SKILLICORN.
Councillor CALVERT.	The Revd. G. R. KEMP.
Councillor Mrs. CULVERWELL.	Miss D. A. HUMPHRIES.
Councillor DEAN.	Mr. C. GENT.
Councillor Mrs. HENN.	County Councillor Mrs. HEPHER.
Councillor Miss HOWLETT.	County Councillor MARTIN.

Welfare Sub-Committee

Chairman : Councillor DEAN.

The MAYOR.	Councillor Mrs. MORSE.
Alderman AMEY.	Mr. C. GENT.
Alderman HICKSON.	Dr. R. F. RATTRAY.
Alderman MALLETT.	County Councillor Mrs. HEPHER.
Alderman MOLE.	The Revd. G. R. KEMP.
Councillor Mrs. CULVERWELL.	Miss E. A. LENNARD.
Councillor Mrs. HENN.	

Special Schools Sub-Committee

Chairman : The Lady ADRIAN.

Alderman MALLET.

Councillor Mrs. ABRAMS.

Councillor ARUNDALE.

Councillor Mrs. CULVERWELL.

Councillor DEAN.

Councillor Mrs. MORSE.

Miss E. A. LENNARD.

Mrs. McCULLAGH.

Mrs. RODEN.

Mr. C. GENT.

Care Sub-Committee

Chairman : Miss E. A. LENNARD.

Alderman AMEY.

Alderman MALLET.

Councillor DEAN.

Mrs. RODEN.

SECTION 2. STAFF AND ORGANIZATION OF THE DEPARTMENT

STAFF OF THE DEPARTMENT

Medical Officer of Health and Principal School Medical Officer :

CYRIL G. EASTWOOD, M.D., CH.B., B.Sc., M.R.C.S., L.R.C.P., D.P.H.,
F.R.S.H.

Deputy Medical Officer of Health and Deputy Principal School Medical Officer :

MARGARET C. K. PATTERSON, M.B., CH.B., D.P.H., D.O. (OXON).

Principal School Dental Officer :

J. R. TOLLER, M.D.S., L.D.S.

Chief Public Health Inspector :

J. F. EDWARDS.^{1 2 3 4}

Deputy Chief Public Health Inspector :

H. C. REEVE¹²³⁴ (Until 31. 10. 63).

¹ Certificate of the Royal Society of Health and Sanitary Inspectors' Joint Board.

² Meat and Foods Certificate of the Royal Society of Health.

³ Certificate in Sanitary Science of the Royal Society of Health.

⁴ Certificate in Smoke Inspection of the Royal Society of Health.

Administrative Assistant:

R. J. MITTON, M.R.I.P.H.H., A.R.S.H.

Home Help Organiser :

Mrs. M. L. COOPER.

Assistant Home Help Organiser :

Miss C. M. GIBSON.

Superintendent of Home Nurses and Midwives :

Miss A. M. McNIVEN, S.R.N., R.S.C.N., S.C.M. (*Queen's Nurse*)

Matron of Sedley Nursery :

Mrs. E. E. CALLOW, S.R.N., R.S.C.N.

Other Staff :

<i>Posts</i>	<i>Establishment</i>		<i>Posts Filled</i>		<i>Notes</i>
	<i>Full time</i>	<i>Part time</i>	<i>Full time</i>	<i>Part time</i>	
Assistant Medical Officers	2	2	1	2	
Ophthalmic Surgeon... ..	—	1	—	1	
Anaesthetist	—	1	—	1	
Dental Officers	5	1	3	1	
Public Health Inspectors	6	—	6	—	
Pupil Inspectors	2	—	1	—	
Health Visitors and School Nurses ...	15	—	15	—	1 Queen's Nurse
District Nurses	13	—	12	2	4 Queen's Nurses
Midwives	8	—	8	—	
Physiotherapists	3	—	3	—	
Speech Therapists	—	4	—	4	
Orthoptist	—	1	—	1	
Home Teacher Welfare Officers ...	3	—	3	—	
Nursery Staff : Deputy Matron, Warden, Nursery Nurses and Assistants	5	—	5	—	
Dental Technician	1	—	1	—	
Dental Surgery Assistants	6	1	4	1	
Clerical	21	—	21	—	
Sanitary	5	—	5	—	
Domestic	3	—	3	—	
Home Helps	80	or	41	101	equivalent to 82 full time
	equiv	alent			

Among the nursing, inspectorial, medical-auxiliary and clerical groups of the staff there were resignations and new appointments too numerous to particularise. For the most part resignations are caused by the securing of higher posts elsewhere and, in the case of women, by marriage and removal from Cambridge. New appointments then become necessary as replacements.

Mr. Reeve, Deputy Chief Inspector, left to go to Guildford as Chief Public Health Inspector.

Messrs. Fenn, Williams and Phillips, Public Health Inspectors, obtained their certificates as Smoke Inspectors during the year. Mr. J. Harding, Senior Clerk, passed the final examination for the Diploma in Municipal Administration. Miss Racey, of Sedley Nursery, completed the course of training as a Nursery Warden.

The work of meat inspection increased considerably during the year with the opening of another new slaughterhouse in the city. A great deal of overtime was worked by the inspectorial staff from the Chief downwards, particularly on Saturdays and Sundays.

The Home Teachers of the Blind were re-designated as Home Teacher and Welfare Officers, a description more in accordance with their duties, since home teaching, although still important, now only occupies a relatively small proportion of their time, which is very largely spent upon general social welfare work amongst the blind and physically handicapped.

The Mental Welfare Officers of the Cambridge Mental Welfare Association were transferred to the staff of the County Council when this body took over direct responsibility for the work. The two officers assigned to the city were formally taken upon my staff under the terms of the Scheme of Delegation of Welfare Services but, in order to facilitate the mental welfare work, they have remained stationed at the offices in Gloucester Street.

A part-time audiometrist was appointed for work in the School Health Service and this is enabling us to make a determined effort to discover hearing defects in children at an age when something can still be done to put them right.

We continued to receive a great deal of voluntary help : not only at the infant welfare clinics but in connection with the blind and physiotherapy for school children.

(Medical Officer of Health)



PREMISES USED BY THE DEPARTMENT



- | | | |
|------------------------------|--------------------------|--------------------------|
| 1. Kett House. | 6. Arbury Rd. Clinic. | 11. Newnham Clinic. |
| 2. Auckland Rd. Clinic. | 7. Chesterton Clinic. | 12. Trumpington Clinic. |
| 3. Romsey Clinic. | 8. East Barnwell Clinic. | 13. Lady Adrian School. |
| 4. Cherry Hinton Clinic. | 9. Castle St. Clinic. | 14. Roger Ascham School. |
| 5. Milton Rd. Dental Clinic. | 10. Norwich St. Clinic. | |

THE COST OF THE DEPARTMENTAL SERVICES

This Report deals with the calendar year 1963 but the Council's financial year runs from April to the following March. Because of this, it is difficult to give the cost of the various services for the period under review but the following figures (for the financial year ended March 31st 1964) are reasonably relevant.

Service	Net expenditure £	Net expenditure per head of population			Net expenditure per head per week (pence)
		£	s	d.	
Environmental health	33425	7	0		1.61
School Health Service	28250	5	10		1.36
Other Welfare Services	104631	1	1	9	5.02

Note : The population used is the Registrar General's estimated population in June 1963 (96,020).

PART II
GENERAL STATISTICS
OF HEALTH AND
DISEASE

SECTION 1. STATISTICAL SUMMARIES

STATISTICAL SUMMARY FROM 1875

	1875	1880	1890	1900	1910	1920	1930	1940	1950	1960	1961	1962	1963
Population ...	30078	35000	41070	38607	40509	60154	60730	79140	90470	93840	94810	95380	96020
Marriages ...	...	...	...	...	307	563	449	...	...	728	672	722	758
Marriage Rate	...	...	...	...	15.1	18.7	14.7	...	...	15.5	14.1	15.1	15.7
1. Live Births...	881	1040	934	923	799	1219	761	893	1322	1418	1448	1442	1478
Live Birth Rate	29.3	29.7	22.7	23.9	19.7	20.2	12.5	11.3	14.6	15.1	15.2	15.1	15.3
Still Births...	59	...	...	...	26	28	44	16	33	18.	16	23	23
Still Birth Rate	94.7	...	...	...	31.5	22.4	54.6	17.6	24.3	12.5	10.9	15.6	15.5
Total Births	940	...	...	...	825	1247	805	909	1355	1436	1464	1465	1501
Total Deaths	532	606	656	604	513	568	680	949	885	917	1023	958	984
1. Death Rate	17.7	17.3	15.9	15.9	12.6	9.4	11.3	11.9	9.7	9.7	10.7	10.0	10.2
2. Infant Mortality	...	168	134	122	61	50	31	34	26	26	22	22	23
I.M. Rate ...	...	161	143	132	76	41	40	38	19.6	18.3	15.1	15.2	15.5
Legitimate I.M. Rate	...	...	...	...	9.5	...	36	35	18.4	17.9	15.3	15.5	15.3
Illegitimate I.M. Rate ...	...	...	...	...	95.2	...	...	...	41.0	24.0	12.6	10.6	18.6
3. Neonatal Mortality	...	...	...	...	...	...	...	...	...	16	16	19	18
N.M. Rate ...	...	...	...	...	...	...	...	...	...	11.2	11.0	13.1	12.1
4. Illegitimate Live Birth Rate	...	...	...	...	5.3	5.1	4.4	...	5.5	5.8	5.4	6.5	7.2
Maternal Deaths	...	...	...	...	...	...	4	3	0	—	1	—	—
Maternal Mortality Rate	...	...	...	...	...	...	4.9	3.3	0	—	0.6	—	—

The records began in 1875 but, as they are incomplete, some of the figures for earlier years are approximations.

For explanation of the various rates see the Statistical Summary for 1963.

1. Uncorrected.
2. Deaths under 1 year.
3. Deaths under 4 weeks.
4. Illegitimate births **per cent.** of total live births.

STATISTICAL SUMMARY, 1963

Area (acres)	10,057
Population: Census, 1961	95,358
Registrar-General's estimate at June 30th, 1963 (including 9,079 University Population)	96,020
Number of persons per acre	9.8
Number of Inhabited Houses	28,832
Average number of persons per house	3.3
Estimated Rateable Value	£5,267,065
Estimated Sum represented by a penny rate	£20,470

Marriages.

Number of Marriages	Total	758
Marriage rate (number of persons marrying per 1,000 population)		15.7

Births.

Live Births	$\left\{ \begin{array}{l} \text{Legitimate 1,371 (715 males, 656 females)} \\ \text{Illegitimate 107 (49 males, 58 females)} \end{array} \right\}$	Total	1,478
Live Birth rate (number of births per 1,000 population)			15.3
Live Birth rate corrected by comparability factor (0.96)			14.6*
Illegitimate live births per cent of total live births			7.2
Still Births	$\left\{ \begin{array}{l} \text{Legitimate 21 (11 males, 10 females)} \\ \text{Illegitimate 2 (1 male, 1 female)} \end{array} \right\}$	Total	23
Still Birth rate (number of still births per 1,000 total births)			15.5
Total Live and Still births.			1,501

Deaths.

495 males, 489 females	...	...	...	...	...	Total	984
Death rate (number of deaths per 1,000 population)	...	...	...	...	...		10.2
Death rate corrected by comparability factor (1.06)	...	...	...	...	...		10.8*
Infants deaths under 1 year	{	Legitimate	...	21	}	Total	23
		Illegitimate	...	2			
Total infant mortality rate (deaths under 1 year per 1,000 live births)	...	...	...	...	...		15.5
Legitimate infant mortality rate (legitimate deaths under 1 year per 1000 legitimate live births)	...	...	...	...	...		15.3
Illegitimate infant mortality rate (illegitimate deaths under 1 year per 1000 illegitimate live births)	...	...	...	...	...		18.6
Neonatal mortality (deaths in first 4 weeks)	{	Legitimate	17	}	Total	18	
		Illegitimate	1				

Neonatal mortality rate (deaths in first 4 weeks per 1,000 live births)	... ..	12.1
Early neonatal mortality (deaths in 1st week)	... ..	17
Early neonatal mortality rate (deaths in 1st week per 1000 live births)	... ..	11.5
Perinatal mortality (combined still-births and deaths in 1st week)	... ..	40
Perinatal mortality rate (combined still-births and deaths in 1st week per 1000 live and still-births)	... ..	26.6
Maternal deaths (including abortion)	... ..	—
Maternal mortality rate (maternal deaths per 1000 live and still births)	... ..	—

* See page 21 for explanation of Comparability Factor.

SECTION 2. VITAL AND MORTAL STATISTICS

POPULATION

The Registrar-General's estimate of the population of the City on June 30th 1963 was 96020. This includes 9079 members of the University. In 1962, the estimated total was 95380 and the number of members of the University was 9040.

Natural Increase of the Population.—The following figures show the natural increase or the excess of births over deaths since 1875 :—

Year	Population. ¹	Live Births.	Deaths.	Natural Increase.	Increase per cent ²
1875	30078	881	532	349	—
1900	38607	923	604	319	0.30
1925	59020	838	609	229	0.90
1950	90470	1322	885	437	2.08
1960	93840	1418	917	501	1.31
1961	94810	1448	1023	425	0.76
1962	95380	1442	958	484	0.50
1963	96020	1478	984	494	0.10

¹=Mid year estimate.

²=Increase per cent. over previous year.

MARRIAGES

There were 758 marriages of Cambridge people during 1963. The number of people marrying was, thus, 1,516, which gives a marriage rate (number of persons marrying per 1,000 of the population) of 15.7.

BIRTHS

The following table gives particulars of the city births for 1963.

	Live Births.		Still Births.	
	Legit- imate.	Illegit- imate.	Legit- imate.	Illegit- imate.
Males	715	49	11	1
Females	656	58	10	1
	<hr/>	<hr/>	<hr/>	<hr/>
	1371	107	21	2
	<hr/>		<hr/>	
TOTAL... ..	1478		23	
Number of males born per 100 females	107		—	
	<hr/>		<hr/>	
Birth rates	15.3		15.5	
Live birth rate corrected by comparability factor (0.96)	14.6		—	

1367 children were born in Cambridge to parents not resident in the city. These are registered in the usual way, but are not included in the above table. 53 children, whose parents are Cambridge residents, were born outside the city, and these are included in the table.

The crude live birth rate was 15.3 births per 1,000 population. The rate for England and Wales is 18.2, and the average Cambridge rate for the last ten years is 14.5.

Comparison between our birth rate and that of other towns is complicated by the fact that all towns do not have a population of the same composition. Some places attract a larger number of retired people, and so the birth rate may seem unduly low. New industrial areas may have a high proportion of young married people with a correspondingly high birth rate. The Registrar-General, therefore, calculates a comparability factor and, when this is applied to the crude birth rate, the resulting figure is what the birth rate would be if Cambridge had a theoretical standard population. When all birth rates are based upon this same standard population, comparison of one with another becomes possible and useful.

Births in Institutions.—The proportion of infants born in Nursing Homes and Hospitals was 58.4 per cent. of the total births, a decrease of 4.2 per cent. as compared with the preceding year.

The following is a summary of institutional births belonging to Cambridge :—

			Births.	Percentage of total Births.
Private Nursing Homes	...	...	89	5.9
Maternity Hospital	...	...	789	52.5

DEATHS

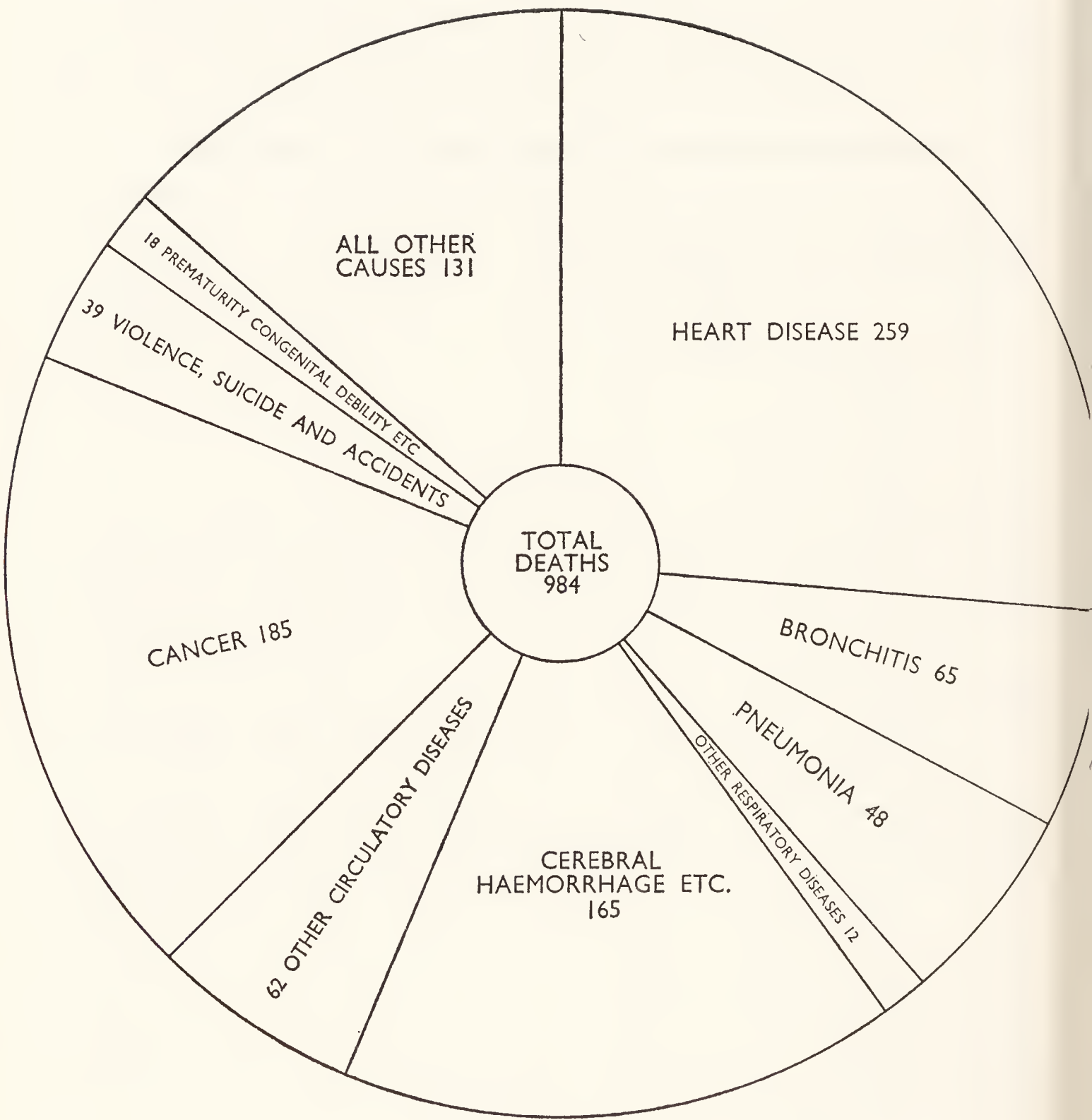
The number of deaths recorded was 984 (495 male, 489 female) an increase of 26 compared with 1962. Cambridge residents who died away from the city are included in these figures. Strangers who died while in Cambridge are excluded.

The crude death rate was 10.2 per 1,000 of the population. The rate for England and Wales was 12.2.

As in the case of the birth rate, correction of the death rate by a comparability factor is statistically desirable. The factor in this case is 1.06 and the corrected death rate is 10.8.

Causes and Ages of Death during the Year 1963

Causes of Death.	All Ages.	Under 1 Year.	1-24	25-44	45-64	65 and up-wards
Tuberculosis of Respiratory System ...	3	—	—	1	1	1
Other Infective and Parasitic Diseases ...	2	—	1	—	1	—
<i>Cancer:—</i>						
Lungs and Bronchus ...	42	—	—	—	24	18
Other ...	143	—	2	5	56	80
Leukaemia ...	4	—	—	3	—	1
Diabetes ...	5	—	—	—	1	4
Vascular Lesions of Nervous System ...	165	—	—	2	19	144
Heart Disease ...	259	—	—	5	49	205
Other Circulatory Diseases ...	62	—	—	1	12	49
Pneumonia ...	48	2	1	1	2	42
Bronchitis ...	65	—	1	—	15	49
Other Diseases of Respiratory System ...	12	2	2	—	2	6
Ulcer of Stomach and Duodenum	9	—	—	—	4	5
Nephritis ...	2	—	—	—	1	1
Hyperplasia of Prostate ...	5	—	—	—	—	5
Congenital Malformations ...	8	3	3	—	—	2
Other Defined and Ill-defined Diseases ...	102	14	5	3	14	75
Motor Vehicle Accidents ...	8	—	4	2	—	2
All Other Accidents ...	22	2	3	1	—	16
Suicide ...	9	—	3	2	2	2
Totals ...	984	23	25	26	203	707



**Analysis of
Accidental
Deaths.**

Road Accidents	...	...	...	...	...	8
Consequent upon a fall	...	...	...	...	...	10
Barbiturate poisoning	...	...	...	...	...	1
Coal gas poisoning	...	...	...	...	...	7
Gunshot wound	...	...	...	...	...	1
Asphyxia	...	...	...	...	...	2
Paraldehyde poisoning	...	...	...	...	...	1
						<hr/> 30 <hr/>

**Analysis of
Suicides.**

Coal gas poisoning	...	...	...	...	...	4
Barbiturate poisoning	...	...	...	...	...	1
Run over by train	...	...	...	...	...	2
Gunshot wounds	...	...	...	...	...	2
						<hr/> 9 <hr/>

Deaths in Public Institutions.—During the year there were 537 deaths of Cambridge residents in Public Institutions and Nursing Homes. This is 54.3 per cent. of the total number of deaths. Last year the percentage was 58.7.

Institution.				Number of Deaths.	Per cent. of total Deaths.
Addenbrooke's Hospital	...	...	...	250	25.4
Maternity Hospital, Mill Road	...	...	...	24	2.4
Chesterton Hospital	...	...	...	145	14.7
Brookfields Hospital	...	...	...	18	1.8
Private Nursing Homes	...	...	...	42	4.2
Other Institutions	...	...	...	58	5.8
Total				<u>537</u>	<u>54.3</u>

Maternal Mortality.—There were no deaths during the year.

The number of deaths of mothers from sepsis, and from other puerperal conditions for the past ten years was 0 from sepsis and 1 from all other conditions.

The death rate from puerperal sepsis for the same period has been *nil*, and from other puerperal conditions 0.0006 per 1,000 births.

Infant Mortality.—By infant mortality is meant the number of deaths of infants under 1 year of age. This was 23 in 1963.

The Infant Mortality rate is the number of deaths under 1 year per 1,000 live births. The rate was 15.5 in 1963. The rate for England and Wales was 20.9.

The Infant Mortality rate is a delicate index of the general healthiness of a community, since infants have a more tenuous grasp of life than older persons, and so tend to be more readily killed by disease and by poor environment. The following table shows the decline in the infant mortality rate during this century.

Year.	No. of Infant Deaths.	Infant Mortality Rate. *	Percentage of total deaths at all ages.	Infant Mortality rate for England and Wales. *
1900	128	132	21.9	154
1910	61	76	12.0	105
1920	50	41	8.8	80
1930	31	40	4.6	60
1940	34	38	3.6	55
1950	26	20	2.9	30
1960	26	18	2.8	21
1961	22	15	1.4	21
1962	22	15	2.2	21
1963	23	15	2.3	20

* These figures are rounded off to the nearest whole number and so may not quite agree with statements elsewhere in this Report.

Net Deaths from Stated Causes at Various Ages under 1 Year

Causes of Death.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total deaths under 1 year
Neo-Natal Asphyxia	1	-	-	-	1	-	-	-	-	1
Pneumonia ...	1	-	-	-	1	-	-	1	-	2
Congenital Heart Disease and Malformations ...	3	-	-	-	3	-	-	-	-	3
Premature Birth ...	7	-	-	-	7	-	-	-	-	7
Other Causes ...	5	1	-	-	6	1	1	-	2	10
Totals ...	17	1	-	-	18	1	1	1	2	23

Neo-natal Mortality.—The decline in infant deaths shows that they are preventable in great measure, but there is a “hard core” due to causes which are, probably, irremovable. Various kinds of congenital abnormality and prematurity of birth are examples of such causes of death. These causes operate very early in life, in the first week or fortnight as a rule. It will be seen from the preceding table that 18 out of the 23 infant deaths occurred in the first month, and this may be expressed as a neo-natal mortality rate of 12.1 (deaths under 4 weeks per 1,000 live births).

SECTION 3. THE INCIDENCE AND CONTROL OF DISEASE

INFECTIOUS DISEASES NOTIFICATIONS RECEIVED DURING THE YEAR

	Under 1 year.	1-2 years.	3-4 years.	5-9 years.	10-14 years.	15-24 years.	25-44 years.	45-64 years.	65 years & over.	Age unknown	Total
Scarlet Fever ...	—	3	12	24	3	1	1	—	—	—	44
Puerperal Pyrexia ...	—	—	—	—	—	15	15	—	—	2	32
Pneumonia ...	—	—	—	—	—	1	—	—	2	—	3
Erysipelas ...	—	—	—	1	—	—	—	—	1	—	2
Dysentery ...	5	9	18	38	6	19	26	6	1	5	133
Measles ...	27	332	481	713	34	17	6	—	—	18	1628
Infective Hepatitis ...	—	—	—	—	—	3	1	—	—	—	4
Tuberculosis :—											
<i>Respiratory</i> ...	—	—	1	—	—	7	12	7	3	—	30
<i>Non-Respiratory</i>	—	—	—	—	—	—	1	—	—	—	1
Meningococcal Infection ...	—	2	—	—	—	—	—	—	—	—	2
Paratyphoid Fever ...	1	4	—	3	2	1	2	2	1	1	17
Whooping Cough	4	4	6	8	1	—	—	—	—	1	24

Measles.—Measles occurs, usually, every second year and the outbreak this year was expected. The disease was mild and there were no deaths. At one time, measles was always followed by an outbreak of Whooping Cough but, since immunisation against this disease was introduced, this no longer occurs.

Paratyphoid Fever.—Between January and the end of March 1963 about 250 human infections with Paratyphoid (in which the suspected source of infection was frozen whole egg from China) were known to have occurred in outbreaks in Great Britain. The foodstuffs, common to the outbreaks concerned were cream cakes and similar con-

fectionery. One of the outbreaks, with more than 60 infections, occurred in East Anglia and, again, suspicion fell upon cream cakes and chocolate eclairs prepared in a bakery from frozen whole egg from China.

17 cases occurred in the City but, since an infectious disease of this kind is very liable to spread through whole families once it occurs, some 97 people had to be thoroughly investigated and supervised. Outbreaks of infectious disease do not respect local government boundaries and our 17 cases were only part of a larger number extending throughout the county and beyond. Looking at the outbreak as a whole it was clear that a considerable number of those infected had eaten confectionery of a type likely to contain frozen whole egg, and although we sample and analyse this material in the City periodically, it seemed desirable to make an intensified investigation. No Chinese egg used in Cambridge was actually incriminated as a source of infection but a number of samples did contain undesirable germs of one sort or another and so were withdrawn from use. In May the Ministry of Health took steps to ensure that all whole egg in bulk was pasteurised before use.

Tuberculosis.—The number of cases notified during the year was 31. The respiratory cases numbered 30 and the non-respiratory 1. Nine tuberculous patients died during the year.

The number of cases of tuberculosis on the register at the end of 1963 was 301, of whom 193 were males and 108 females. The respiratory cases numbered 264 (176 males and 88 females) and the non-respiratory 37 (17 males and 20 females). Provision of treatment is a responsibility of the Regional Hospital Board.

During the year B. C. G. Vaccination was continued in the Senior Schools in the City. This vaccination gives resistance to tuberculosis in a way similar to other inoculations, i.e. immunisation against diphtheria, whooping cough and poliomyelitis.

I give hereunder a table showing the number of children tested, found to be negative and vaccinated and also the number of children who showed a certain immunity to the disease :

No. who accepted Skin Test and Vaccination	No. who accepted Skin Test only	No. skin Tested	Number Positive	Number Negative	Number Vaccinated
1294	—	1175	251	863	862

The Mass Radiography Unit of the Regional Hospital Board continued to offer facilities for the examination of Cambridge citizens during the year.

VACCINATION AND IMMUNIZATION*

Smallpox.—During the year 919 persons were vaccinated in the City. As was expected following the mass vaccination in 1962 (due to a suspected case of smallpox) the figures for 1963 dropped considerably.

Diphtheria.—During the year 1416 children were immunised against Diphtheria and 628 were given a reinforcing injection following earlier immunisation.

Whooping Cough.—1321 children were immunised against Whooping Cough, many of these at the same time as Diphtheria immunisation.

Poliomyelitis.—2949 children completed a course of immunisation during the year.

* See page 78 for the numbers done at our own clinics.

INVESTIGATION AND DISINFECTION

The Inspectors made 391 visits to houses, schools, hospitals and places of work, investigating infectious diseases. This was additional to visits by medical officers and nursing staff (for which see Part IV of this Report.)

During the year 130 disinfections of premises were carried out. We also assist the police from time to time and have an arrangement with the Public Libraries for preventing the spread of infection through books. 20 parcels of gift clothing for overseas were disinfected here in compliance with government requirements.

32 articles of clothing and bedding were disinfected in our "Sparkhall" apparatus.

PART III
ENVIRONMENTAL
HYGIENE

SECTION 1. NATURAL AND SOCIAL CONDITIONS

TOPOGRAPHY

The City is situated in latitude $52^{\circ} 12'$ N. and longitude $0^{\circ} 7'$ E., about fifty miles north of London, on the midland side of East Anglia and in the southern part of the Fen District. The City is shaped like a very rough rectangle, about five miles from north to south and four miles from east to west. It is very low lying, the greater part being between 25 and 50 feet above sea level. In three places (near the railway station, at Trumpington and near Madingley) the ground rises above 50 feet and, on the boundary near to Girton, somewhat exceeds 75 feet. The only really high ground within the City boundary is at what may be termed the south eastern "corner" where, at the beginning of the Roman road and exactly on the City boundary, a height of 225 feet is reached.

The City stands upon clay but this is overlain by gravel in a broad belt extending roughly from south-west to north-east. Through the middle, along this line, flows the River Cam which is the main means of drainage of the City. The river enters the City at the south-west, close to the 25 foot contour and leaves at the north-eastern extremity where the boundary is a little below 25 feet. The water is analysed periodically.

CLIMATE

As part of Great Britain, Cambridge shares in the insular climate but, since it is in a comparatively flat part of the country and facing the continent, it also shares to some extent in the Continental type of climate and falls somewhere between the truly insular and the truly continental. The prevailing winds come from the south-west and the rainfall is low relative to the rest of the country. There is an average of about 22 inches a year, with the greatest fall in October as a rule, and the least rain in February, although the actual number of rainy days is about the same in each of these extreme months.

The hours of sunshine amount to almost 7 per day in the middle of June and fall to less than 2 per day in December, averaging somewhat over 4 for the whole year. The relative humidity is, on the average, about 80, being at a maximum in December and January and a minimum about June.

The following list summarises the principal meteorological observations of 1963 (the figures in brackets are the averages for the past six years) :—

Rainfall :

Total	...	...	...	...	21.37 inches	...	(23.15)
Number of days with rain	...	173	...	...			(159)
Days with 0.04 inches or more	...	119	...	...			(111)
Days with less than 0.04 inches	...	54	...	...			(49)
Heaviest fall in 24 hours	...	1.42 inches	(Aug. 17th)				(1.30)

Temperature :

Highest temperature in screen ...	80°F. (31st May and 30th July)	(84°)
Lowest temperature in screen ...	3°F. (23rd Jan.)	(14°)
Lowest grass temperature ...	5°F. (24th Jan.) ...	(9°)
Number of frosts (<i>i.e.</i> , 32° F. and below) in screen. ...	83	(58)
Number of ground frosts (<i>i.e.</i> , 30° F. or below on grass) ...	130	(101)

Miscellaneous :

Days with fog ...	11	(17)
Days with thunder ...	3	(11)
Days with snow ...	57	(70)

The year was notable for the long and severe frost which began on Boxing Day 1962 and lasted, with two slight intermissions, until February 10th 1963. There was a further sharp frost at the end of February and the unusually severe winter did not end until March.

INDUSTRIES AND COMMUNICATIONS

The University may be regarded as the oldest and one of the most important “ industries ” of the City and, apart from its members, employs directly and indirectly a considerable number of people. The University Press may also be considered one of the city’s principal industries. Other important trades and manufacturers are the production of radio and television equipment, scientific instruments, dairy equipment, cement and asphalt. Flour milling is carried on, and there are some other, smaller, industrial activities.

The city is well served by roads and railways, and there is an airport for private aviation immediately outside the boundary.

SECTION 2. THE ATMOSPHERE

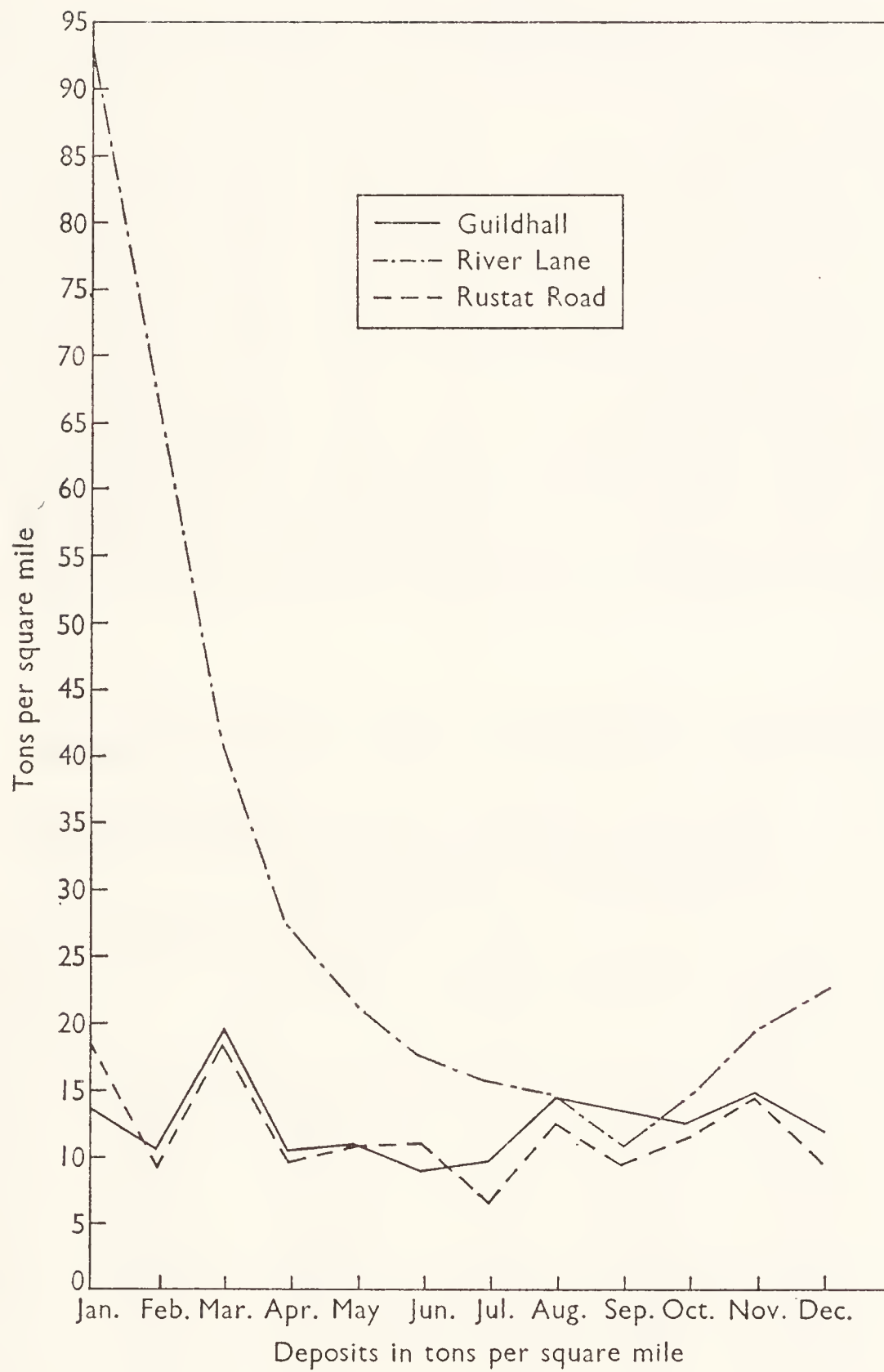
ATMOSPHERIC POLLUTION

The Clean Air Act 1956 laid upon local authorities certain obligations, both mandatory and permissive, to ensure the cleanliness of the air we breathe. It was a recognition in statutory form of the inescapable fact that there is no possible way of avoiding taking into our lungs everything, good and bad, held in the atmosphere.

New installations for burning fuel, within certain categories, must be reported to the local authority and requirements as to suitability, combustion performance and—particularly—heights of chimneys are specified. All these things are necessarily interlinked in order to produce the minimum amount of harmful effluent and to see that it is discharged at a height sufficient to ensure its dispersal and dilution. That this is not always appreciated is shown by the stoker, who when taxed about his smoking chimney remarked that “ nobody lived up there ”. In effect we all live “ up there ”.

The design, shape, height and indeed the very existence of chimneys, for some strange reason, appear to excite otherwise quite reasonable people quite unduly. When faced with the necessity of having a chimney the immediate reaction of many designers is to pretend it isn't there or at least that it looks like something else. The most bizarre shapes are acceptable in other parts of the building but they are only happy if the chimney is disguised to look like a watertower on a turret or some other “ reasonable ” feature. One tendency of this technique of dissimulation is to endeavour to keep the chimney as low as possible—a modern reaction against that most graceful of architectural styles, the perpendicular. Keeping a chimney low keeps the effluent low as has been demonstrated by the bitter complaints of many top flat dwellers in high blocks where architectural prejudices have, only too well, disguised the chimney as something else.

All these relevant factors are taken into account in assessing heights of chimneys but inevitably conflicts arise with reasonable arguments on both sides. In that event usually the difficulties can be overcome by redesigning plant to different specifications and so far this has worked very satisfactorily. Acknowledgements for invaluable help in this connection are due to Mr. E. J. Tickner of the National Fuel Efficiency Service who has contributed a great deal towards clean air for Cambridge.

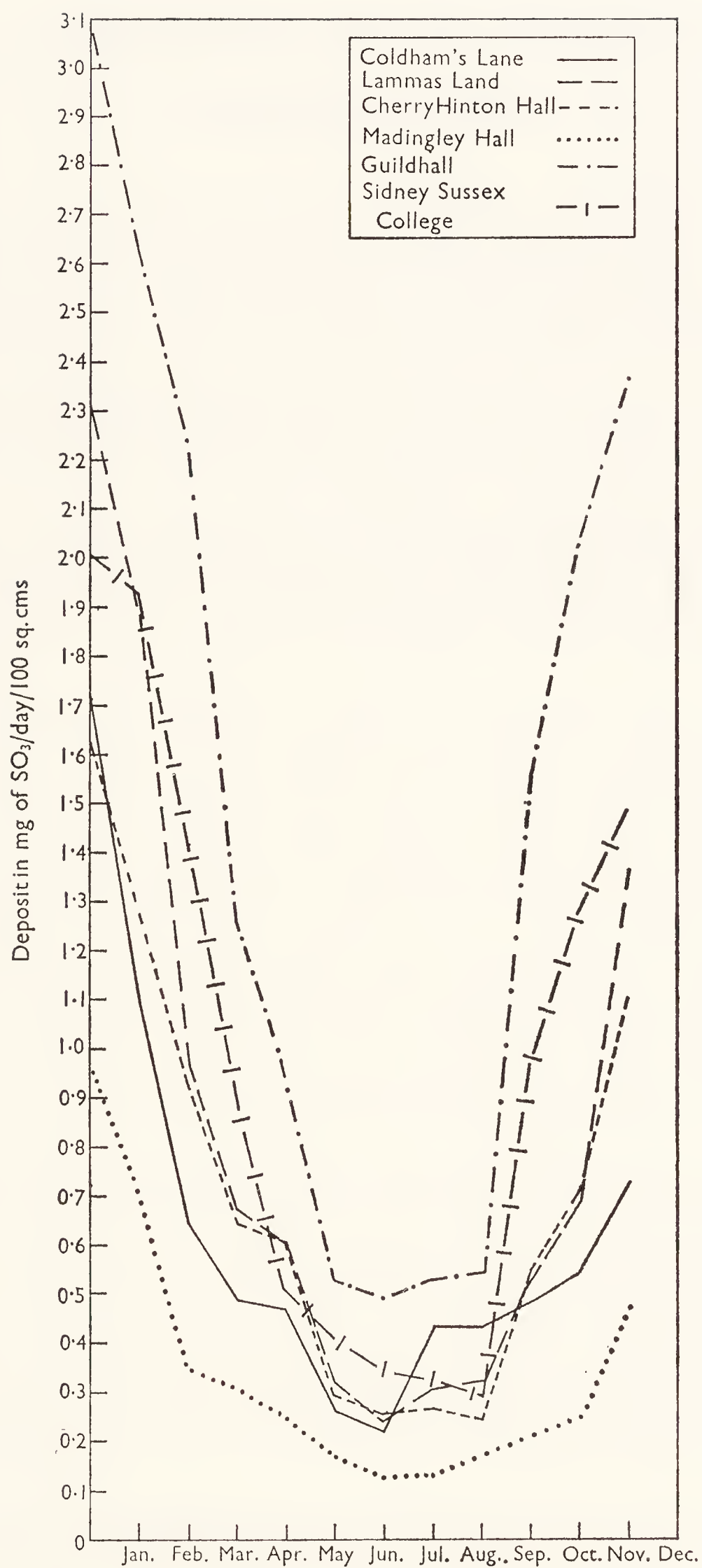


Measurement of Matter collected in Deposit Gauges

Period	Water-Insoluble Matter.			Water-Soluble Matter.			Total Solids.		
	Tons per square mile.								
	Guild-hall.	River Lane.	Rustat Road.	Guild-hall.	River Lane.	Rustat Road.	Guild-hall.	River Lane.	Rustat Road.
January ...	3.97	79.47	4.86	9.80	13.99	13.33	13.77	93.46	18.19
February...	3.80	33.05	3.74	7.17	8.35	5.27	10.97	41.40	9.01
March ...	6.60	21.39	5.44	12.74	12.77	13.19	19.34	34.16	18.63
April ...	4.87	20.98	4.18	5.60	6.69	5.81	10.47	27.67	9.99
May ...	4.10	14.60	5.68	6.84	6.86	5.07	10.94	21.46	10.75
June ...	3.60	9.50	4.22	5.40	7.81	6.70	9.00	17.31	10.92
July ...	3.60	6.49	2.86	6.17	9.36	3.74	9.77	15.85	6.60
August ...	2.53	6.83	3.94	12.17	7.91	8.70	14.70	14.74	12.64
September	2.40	3.92	1.87	11.27	7.20	8.06	13.67	11.12	9.93
October ...	3.70	5.88	3.33	9.00	8.92	8.10	12.70	14.80	11.43
November	3.60	8.62	3.13	11.34	10.98	11.22	14.94	19.60	14.35
December	5.30	15.61	2.65	6.74	6.86	7.17	12.04	22.47	9.82

Estimation of Sulphur by Lead Peroxide Method

Period.	Sulphur Compounds expressed as Milligrams S.O ₃ per day/100 sq. cm. Lead Peroxide.					
	Cold-ham's Lane.	Lammas Ground.	Cherry-hinton Hall.	Madingley Hall.	Guildhall.	Sidney Sussex College.
January	1.687	2.313	1.623	0.977	3.068	2.007
February	1.117	1.884	1.307	0.706	2.618	1.930
March ...	0.646	0.972	0.940	0.347	2.237	1.724
April ...	0.494	0.679	0.655	0.312	1.264	0.897
May ...	0.475	0.605	0.610	0.248	0.948	0.508
June ...	0.266	0.325	0.299	0.169	0.539	0.401
July ...	0.223	0.241	0.252	0.126	0.496	0.347
August ...	0.439	0.311	0.276	0.131	0.531	0.325
September	0.438	0.321	0.251	0.166	0.541	0.296
October ...	0.485	0.537	0.549	0.213	1.562	0.988
November	0.545	0.693	0.707	0.253	2.048	1.293
December	0.729	1.377	1.103	0.474	2.378	1.492



Smoke Control. The centre of the City is covered by a Smoke Control Area and steady progress was made in converting fireplaces to burn smokeless fuel. The Area came officially into force on 1st October 1962 and since then there have been no contraventions. The Lion Yard is outside the area.

After a start had been made by the first area a logical extension seemed to be upwind towards the south-west, thus creating a smokeless sector capable of further extension north and south. Other reasons for choosing this new area were that generally speaking the property in it had the required fifteen years life and that including as it did many irreplaceable college buildings the idea of preservation by smoke control would be welcomed.

In the event the Council decided not to declare the area to be smoke controlled and also decided not to proceed with any further Smoke Control Orders for the time being.

SECTION 3. WATER SUPPLIES

THE PUBLIC SUPPLY

The water supply of the City is provided by the Cambridge Water Company (whose area of supply was extended on April 1st 1963), and is obtained from four deep wells (Fleam Dyke, Fulbourn and Great Wilbraham) sunk in the chalk outcrop in the parishes of Fulbourn and Great Wilbraham some six miles East of the City, and Babraham, four miles South of the City.

The Fleam Dyke Well, with a daily yield which varies seasonally between 3.0 and 3.8 million gallons, is the main source of supply. The well is 162 ft. deep and has a water-tight lining from top to bottom. The pumps are capable of delivery at the rate of 160,000 gallons an hour. The water as piped from the well is practically sterile. Although many thousands of samples have been examined Bacterium Coli has never once been found in 100 .c.c. Despite this fact, a small precautionary dose of 0.08 p.p.m. of chlorine is administered.

The Fulbourn Well has a maximum yield of 2 million gallons a day. The well is 58 ft. deep. The original beam engines were replaced in 1953 by electrically driven pumps and new treatment plant incorporating aeration, chlorination and dechlorination was provided. The chemical quality of the water is at all times excellent, but it is subject to slight intermittent bacterial pollution. Because of this the well water is given a substantial dose of chlorine (0.5 p.p.m.) followed by a contact period of half an hour before being dechlorinated and turned into supply. Bacteriological examinations which are made at weekly intervals have shown that this treatment invariably produces a sterile water. It is anticipated that the quality of the well water will be substantially improved when all premises in the vicinity have been connected to the newly laid sewer towards the cost of which the Water Company has contributed.

The Great Wilbraham source comprises duplicate 14 in. diameter boreholes sunk to a depth of 180 ft., and united by shot firing at a depth of 165 ft. Duplicate electrically driven submersible pumps each having a capacity of approximately 50,000 gallons per hour (1.2 million gallons a day) are installed but, as the maximum maintainable yield of the source is thought to be about 1.25 m.g.d., only one pump is operated at a time. Water from this source, the quality of which is as high as that from Fleam Dyke, is conveyed through 2 miles of 12 in. diameter main to Fleam Dyke where it blends with the Fleam Dyke water and receives the same token dose of chlorine.

The Babraham Source, commissioned in June, 1961, comprises duplicate 17" diameter lined boreholes sunk to a depth of 150' and united by shot firing at a depth of 126 ft. Duplicate electrically driven pumps, each

with a capacity of about 80,000 gallons per hour (2 million gallons a day), are installed but only one pump is operated at a time. After chlorination and dechlorination the water is delivered into the distribution system via three miles of 18 ins. diameter trunk main. To protect the quality of the water at source the Company has constructed and operates a sewage disposal system serving two farms and 14 cottages in the vicinity of the well. As this station is at present operated at infrequent intervals the water as pumped (260 p.p.m.) is not as yet softened but softening plant will be provided when it becomes necessary to take it into regular use.

Water Softening.—The water as pumped from the Fleam Dyke, Fulbourn and Great Wilbraham Wells has a hardness of 250 p.p.m. At Cherry Hinton the trunk mains conveying the water to the city are tapped, and one half of the total flow is passed through a base-exchange softening plant in which the whole of the hardness is removed. Subsequently the hard and softened portions of the supply are blended so that the water passing into supply normally has a total hardness of 125 p.p.m. only.

Service Reservoirs.—On high ground at the top of Lime Kiln Hill at Cherry Hinton there are four covered service reservoirs having a combined capacity of 9 million gallons. These are connected to the trunk mains from the three sources of supply and act as balancing tanks. Thus, when the demand exceeds the rate of pumping, the balance flows out of the reservoirs and, conversely, when the rate of pumping exceeds the demand the balance flows into the reservoirs.

A further service reservoir with a capacity of 1 million gallons was brought into use during 1962.

General.—On 1st April, 1963, the Company's area of supply was extended to include the City of Cambridge, the Rural Districts of South Cambridgeshire and Chesterton in Cambridgeshire as well as the Borough of St. Ives, the Urban District of Ramsey and the Rural District of St. Ives in Huntingdonshire. The population supplied by the Company has thereby been increased from 125,000 to 195,000 and its area of supply from fifty eight square miles to four hundred and fifty square miles.

During 1963 the supply has been entirely satisfactory as regards both quality and quantity. In fact, never in the 110 years of the Company's existence has it been necessary to restrict supplies on account of water shortage.

During the year 2 samples of raw water were taken by my Department, that going into supply was sampled 35 times for both chemical and bacteriological examinations. Prolonged tests made by the Water Pollution Research Board of the Department of Scientific and Industrial Research have shown that the water as supplied has no plumbo-solvent properties. No contamination of the supply occurred during 1963.

Chemical and bacteriological analysis have been constant and satisfactory throughout.

Number of Samples examined during 1963 :

	<i>Chemical.</i>	<i>Bacteriological.</i>
Raw water—Fleam Dyke ...	2	12
Raw water—Fulbourn ...	12	51
Raw water—Great Wilbraham ...	2	12
Raw water—Babraham ...	2	12
Treated water—Fulbourn ...	nil	52
Treated water—Babraham ...	nil	12
Drawn from the distribution system	2	12

Number of Dwelling-houses within the City at 31st December, 1963 :

(a) Directly supplied from tap ...	...	28,832
(b) Supplied by standpipes ...	...	None
(c) Supplied by private wells, etc. ...	...	None

Analysis.—The following report on the examination of a sample drawn from the distribution system on 2nd October, 1963, may be taken as typical :—

Chemical Results in Parts per Million

Appearance clear and bright.

Colour ...	nil	Turbidity ...	less than 3
pH ...	7.4	Odour ...	nil
Electric Conductivity ...	470	Free Carbon Dioxide ...	16
Chlorine present as		Total Solids ...	320
Chloride ...	19	Alkalinity as Calcium	
		Carbonate ...	205
Hardness : Total ...	150	Carbonate ...	150
Nitrate Nitrogen ...	8.4	Non-carbonate ...	0
Ammonical Nitrogen ...	0.000	Nitrite Nitrogen	Absent
Albuminoid Nitrogen ...	0.000	Oxygen absorbed ...	0.15
Metals ...	Absent	Residual Chlorine	Absent
Calcium (Ca.) : ...	58	Magnesium (Mg.)	1.9

Bacteriological Results

1 day at 37° C. 2 days at 37° C. 3 days at 20—22° C.

Number of Colonies developing on Agar ...	0 per ml.	0 per ml.	1 per ml.
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	<i>Present in.</i>	<i>Absent from.</i>	<i>Probable No.</i>
Presumptive Coli-aerogenes Reaction ...	— ml	100 ml	0 per 100 ml
Bact. coli (Type I) ...	— ml	100 ml	0 per 100 ml
Cl. welchii Reaction ...	— ml	100 ml	

The water is thus excellent for drinking and for domestic and trade purposes.

SWIMMING BATHS

There are two open air public swimming baths within the City, at Jesus Green and Coldham's Common. Both are owned by the Council and are equipped with chlorination and filtration plants.

During the year the new indoor swimming baths were opened at Donkey Common and provide facilities long needed in the City.

The water is heated to 74°F. and is constantly re-circulated. During this re-circulation cycle the water is strained and filtered, and then re-chlorinated before being heated and returned to the pool. The chlorination level is maintained at 1.5 p.p.m. in the main pool and .5 p.p.m. in the small pool. The whole contents of the pools, 220,000 gallons, are circulated every four hours.

THE RIVER CAM

Public interest in the river usually concerns its suitability for bathing and it is easy to forget that the prime function of a river is the drainage of the surrounding land. The cleanliness of the water ought to be judged in relation to this rather than to the relatively minor uses such as bathing.

It is not possible to give a short and definite answer to the question "Is the river clean?" because cleanliness is a relative term. The River Board tries to secure that the water will support fish and vegetable life and will not be obviously offensive as it flows along its course. Cleanliness from this point of view chiefly means the absence of chemical poisons that would be injurious to organic life or would divert oxygen from the fish and plants which need it in order to live. The bather wants to know if the river is clean in a bacteriological sense or whether it contains germs which may be harmful to him, particularly if he happens to swallow some of the water. Looking for germs of disease in a volume of water as great as that of the River Cam is like looking for a needle in a haystack and there is no record of definitely harmful germs ever having been found. The easiest bacteriological examination is to look for the bacillus coli which has its origin in the bowels of men and animals. One would always expect to find this organism in the water of a slowly flowing river passing through agricultural land and a certain amount of contamination of this kind must be accepted as natural and inevitable. Moreover, the bacteriological tests can only give the probable number of coliform bacilli and cannot give a precise and indisputable figure.

During the summer months the river water is regularly analysed but we accept as normal the degree of contamination which has, on the average, existed over the long period of years when such tests have been made. If the numbers of the bacillus coli rise very markedly above this normal and remain high on several occasions when samples are taken then it is reasonable to suppose that contamination is getting worse but very difficult to say what is the cause. Long continued heavy rain washes bacteriological impurities into the water and makes the bacillus coli count much worse. Conversely, long periods of dry weather give results which are better than the average.

SECTION 4. SUPERVISION OF FOOD AND DRUGS

FOOD AND DRUGS SAMPLING

In the accompanying list it will be seen that samples are “ formal ” or “ informal ” and some comment may be useful.

Under the Food and Drugs Act 1955 all the public health inspectors are designated as “ sampling officers ” with statutory powers. The duty laid upon the Council is to sample articles of food and drugs as necessary in order to keep surveillance upon the sale of these things within the City boundaries.

The sampling procedure stipulated in the Act is detailed and must be observed meticulously. It involves first the purchase, then a declaration of the sampling officer's identity and his intention to submit for analysis, next the division of the sample into three parts, with sealing and labelling. All this may have to be done on the counter of a retail shop, with an uncomprehending assistant and before interested customers, so this formal procedure is never undertaken lightly and is in fact done with a specific purpose, the sampling officer having good reason to think it necessary.

It is generally true that a formal sample is taken to provide evidence admissible in court of some offence shown to exist by previous informal sampling.

During the year 214 samples were taken in the city for chemical analysis by the Public Analyst. Of these 25 were milk samples.

General Sampling

The following samples were submitted to the Public Analyst in Cambridge during the year :—

	Number	Genuine	Not Genuine
Accent (Informal)	1	1	—
Apples (Informal)	3	3	—
Apple and Blackberry Pie Filling (Informal)	1	1	—
Artificial Food Colouring (Informal)	2	2	—
Artificial Sweetener (Informal)	1	1	—
Ascorbic Acid (Informal) ...	1	1	—
Bananas (Informal)	1	1	—
Beef Steak (Informal)	1	1	—
Benevict Tonic (Informal) ...	1	1	—
Boned Chicken (Informal) ...	1	1	—
Boneless Chicken (Informal) ...	1	1	—
Butter Drops (Informal) ...	2	2	—
Cakes (Informal)	6	5	1
Cake Mix (Informal)	1	1	—
Caviar (Informal)	1	1	—
Cheese (Informal)	1	1	—
Cheese and Tomato Spread (Informal)	1	1	—
Cherries (Informal)	1	1	—
Chicken and Mushroom (Informal)	1	1	—
Chicklets (Informal)	1	1	—
Chili-Con-Carne (Informal) ...	1	1	—
Chocolate Spread (Informal) ...	1	1	—
Christmas Pudding (Informal)	2	2	—
Codeine (Informal)	1	1	—
Coffee (Informal)	1	1	—
Coffee and Chicory Essence (Informal)	1	1	—
Concentrated Tomato Paste (Informal)	1	1	—
Carried forward ...	37	36	1

	Number	Genuine	Not Genuine
Brought forward ...	37	36	1
Corned Beef (Informal) ...	8	6	2
Cornish Pasty (Informal) ...	1	1	—
Cream (Informal) ...	3	2	1
Cream Cakes (Formal) ...	6	6	—
Cubed Sugar (Informal) ...	1	—	1
Currants (Informal) ...	1	1	—
Curry Powder (Informal) ...	1	1	—
Custard Powder (Informal) ...	1	1	—
Cut Mixed Peel (Informal) ...	2	2	—
Demerara Sugar (Formal) ...	1	1	—
Dessicated Coconut (Informal)	1	1	—
Double Cream (Formal) ...	2	2	—
Dressed Crab (Informal) ...	1	1	—
Dried Mint (Informal) ...	1	1	—
Dried Parsley (Informal) ...	1	1	—
Evaporated Milk (Informal) ...	1	1	—
Faggots (Informal) ...	1	1	—
Figs (Informal) ...	1	1	—
Fish Cakes (Informal) ...	2	1	1
Fish Paste (Informal) ...	2	2	—
Flavoured Cornflour (Informal)	1	1	—
Food Flavouring (Informal)	3	3	—
Ginger Beer (Informal) ...	1	1	—
Glace Cherries (Formal) ...	1	1	—
Glace Cherries (Informal) ...	1	1	—
Glucose (Informal) ...	1	1	—
Grapes (Informal) ...	2	2	—
Hamburgers (Informal) ...	1	1	—
Horseradish (Informal) ...	1	1	—
Ice Cream (Formal) ...	1	1	—
Ice Cream (Informal) ...	1	1	—
Ice Cream Mix (Informal) ...	5	5	—
Invert Sugar (Informal) ...	1	1	—
Jam (Informal) ...	2	2	—
Jelly (Informal) ...	4	4	—
Jellied Eels (Informal) ...	1	1	—
Lamb (Informal) ...	1	—	1
Lemon Curd (Informal) ...	1	1	—
Liquid Apples (Informal) ...	2	1	1
Malt Vinegar (Formal) ...	1	1	—
Malt Vinegar (Informal) ...	1	1	—
Margarine (Informal) ...	1	1	—
Carried forward ...	109	101	8

	Number	Genuine	Not Genuine
Brought forward ...	109	101	8
Meat Paste (Informal) ...	2	2	—
Mild Beer (Formal) ...	3	3	—
Milk (Formal) ...	16	10	6
Milk (Informal) ...	9	7	2
Mincemeat (Informal) ...	1	1	—
Mustard (Informal) ...	1	1	—
Orange Juice (Informal) ...	2	—	2
Orangeade (Informal) ...	4	4	—
Orange with Glucose (Informal)	1	1	—
Pancake and Batter Mix (Informal) ...	1	1	—
Pate de Foie Truffe (Informal)	1	1	—
Peaches (Informal) ...	1	1	—
Peanut Butter (Informal) ...	1	1	—
Pears (Informal) ...	3	3	—
Peas (Informal) ...	2	2	—
Pepper (Informal) ...	2	2	—
Pickle (Informal) ...	3	3	—
Pills (Informal) ...	3	3	—
Plums (Informal) ...	1	1	—
Polony (Informal) ...	1	1	—
Pork Luncheon Meat (Informal)	1	1	—
Pork Pie (Informal) ...	9	9	—
Pork Sausages (Formal) ...	2	1	1
Pork Sausages (Informal) ...	1	1	—
Pork Sausage Meat (Informal)	1	1	—
Pork Savouries (Informal) ...	1	1	—
Prawns (Informal) ...	1	1	—
Prunes (Informal) ...	1	1	—
Pure Beef Hamburgers (Formal)	1	1	—
Pure Lard (Informal) ...	1	1	—
Pure Pork (Informal) ...	1	1	—
Raisins (Informal) ...	1	1	—
Shandy (Informal) ...	3	1	2
Shredded Beef Suet (Informal)	1	1	—
Shrimps (Informal) ...	1	1	—
Soup (Informal) ...	2	2	—
Soup Powder (Informal) ...	1	1	—
Spreads with Butter (Informal)	3	3	—
Starch Reduced Rolls (Informal)	1	1	—
Steak Burgers (Informal) ...	1	1	—
Stuffed Pork Roll (Informal) ...	1	1	—
Carried forward ...	202	181	21

	Number	Genuine	Not Genuine
Brought forward ...	202	181	21
Sultanas (Informal) ...	1	1	—
Sweet Corn (Informal) ...	1	1	—
Tangerines (Informal) ...	1	1	—
Tea (Informal) ...	2	2	—
Terms (Informal) ...	1	1	—
Tomatoes (Informal) ...	1	1	—
Vinegar Flavoured with Chillies (Informal) ...	1	1	—
Whisky (Formal) ...	2	2	—
White Pepper (Informal) ...	2	2	—
TOTAL ...	<u>214</u>	<u>193</u>	<u>21</u>

Three convictions were recorded during 1963. Two were for using dirty milk bottles, and one for selling adulterated whisky.

The dirty milk bottle seems to be always with us. Despite all sorts of competitors it still remains noisy, awkward and prone to misuse of all kinds. The continentals are now using plastic bags, soft and squashy, somehow alien to our entrenched idea of a milk container. Whoever heard of a 'milk-bag'? The answer is that millions of people have and sooner or later we must ourselves find and accept a substitute for the bottle, which is only too handy as a measure for paraffin, petrol, oil, paint and other even more dubious liquids.

MILK

There are prescribed statutory tests which indicate whether milk has been properly heat treated and whether it has been handled hygienically.

Plants used for processing milk within the City are licensed by the City Council. They are inspected regularly by the Public Health Inspectors and frequent samples are taken at the plants and from distributors during delivery. Milk produced or heat treated outside the city is also regularly sampled. The samples are taken for biological and bacteriological examination to the Public Health Laboratory Service.

There are 9 dairies in Cambridge and 119 distributors.

Sale of Milk under Special Designations.—Only Tuberculin Tested milk, Pasteurised milk or Sterilised milk may be sold in Cambridge. The designations may be combined—for example “Tuberculin Tested Milk (Pasteurised)”. All bottles must be marked with the designation of the milk they contain.

<i>Designation.</i>	<i>Short Explanations.</i>
Tuberculin Tested.	Milk from cows which have passed a tuberculin test and a routine clinical examination. The milk must pass certain laboratory tests.
Pasteurised.	Milk which has been treated by heat (to destroy harmful organisms) by an approved process. The milk must satisfy certain tests.
Sterilised.	Milk which has been heated to a high temperature. It must also satisfy a laboratory test.

There are also certain more expensive grades of milk which must contain 4% milk fat. The minimum standard for ordinary milk is 3%. These grades are “Channel Islands”, “Jersey”, “Guernsey” or “South Devon”. The bottles must be marked with a description of the milk.

At the end of 1963 the following licences were in force :—

	<i>Number.</i>
Pasteuriser	3
Dealer in pasteurised milk	103
Dealer in tuberculin tested milk	68
Dealer in sterilised milk	45
Steriliser	1

209 samples of designated milk were examined with the results given below :—

Designation of Milk	No. of Samples Tested	Appropriate Test	No. of Samples		
			Passed	Failed	Void
Pasteurised	54	Phosphatase	54	—	—
		Methylene Blue	52	—	2
Sterilised	18	Turbidity	18	—	—
*Tuberculin Tested (Pasteurised)	121	Phosphatase	120	—	—
		Methylene Blue	115	2	4
Tuberculin Tested	16	Methylene Blue	16	—	—

* 1 sample was not submitted to the phosphatase test.

It is disappointing to record so many failures of the phosphatase and methylene blue tests on milk dispensed from vending machines within the City. In some instances investigation revealed that milk was remaining in the machines too long. These failures were not restricted to a particular machine or vendor. It is hoped that steps taken during the year will produce better results.

The phosphatase test is used to indicate whether milk has been properly pasteurised. No samples failed the test. When a sample of milk fails the test Public Health Inspectors visit the plant. Temperature recording charts are examined and further samples are taken.

Ice Cream

22-32 samples of ice cream were taken during the year and were examined by the Public Health Laboratory. They were graded according to Ministry of Health procedure as follows :—

Grade 1 (Satisfactory)	...	...	...	16
Grade 2 (Fair)	...	...	...	4
Grade 3 (Unsatisfactory)	...	...	...	2

FOOD INSPECTION

Food may be of the nature, substance and quality which the purchaser demands in the sense of having the prescribed composition and being free from adulteration but it may, nevertheless, be unsuitable for consumption by being diseased or decayed. Inspection is designed to discover such food so that it may be got rid of safely.

Meat Inspection

On 1st September 1963 Messrs. F. Winton-Smith moved into their new slaughterhouse on Coldham's Lane, vacating the old premises in East Road. The new slaughterhouse embodies all modern improvements and layout, including adequate facilities and accommodation for inspectors. Messrs. Winton-Smith's architects worked closely with the Department of Public Health and the result was, we hope, beneficial to both parties. The capacity of the new slaughterhouse greatly exceeded that of the old and from the start throughput figures increased.

From 1st October 1963 it became possible to charge for inspecting meat, which would then be marked with the appropriate identifying stamp. Local authorities were required to inspect according to new regulations before operating this system. If circumstances, such as staff shortages, prevented this, a period of two years' grace was allowed during which the old regulations were to be continued but no charge made. From 1st October 1965 the new regulations will be mandatory throughout the country. In Cambridge staff shortages did in fact prevent the enforcement of charging and so far no charges have been made in the ordinary course of inspection. With the national shortage of trained men willing to undertake this responsible job it is difficult to see the position resolved by 1965.

Horses for human consumption continue to be slaughtered at Messrs. Pink Bros. Most of the trade is for the continent but only the Belgian authorities accept the official certificate of our Public Health Inspectors. The place is generally well managed and has a refrigerated store. 904 horses were slaughtered there during 1963. The condemnations were small and related to 92 livers and 53 part livers.

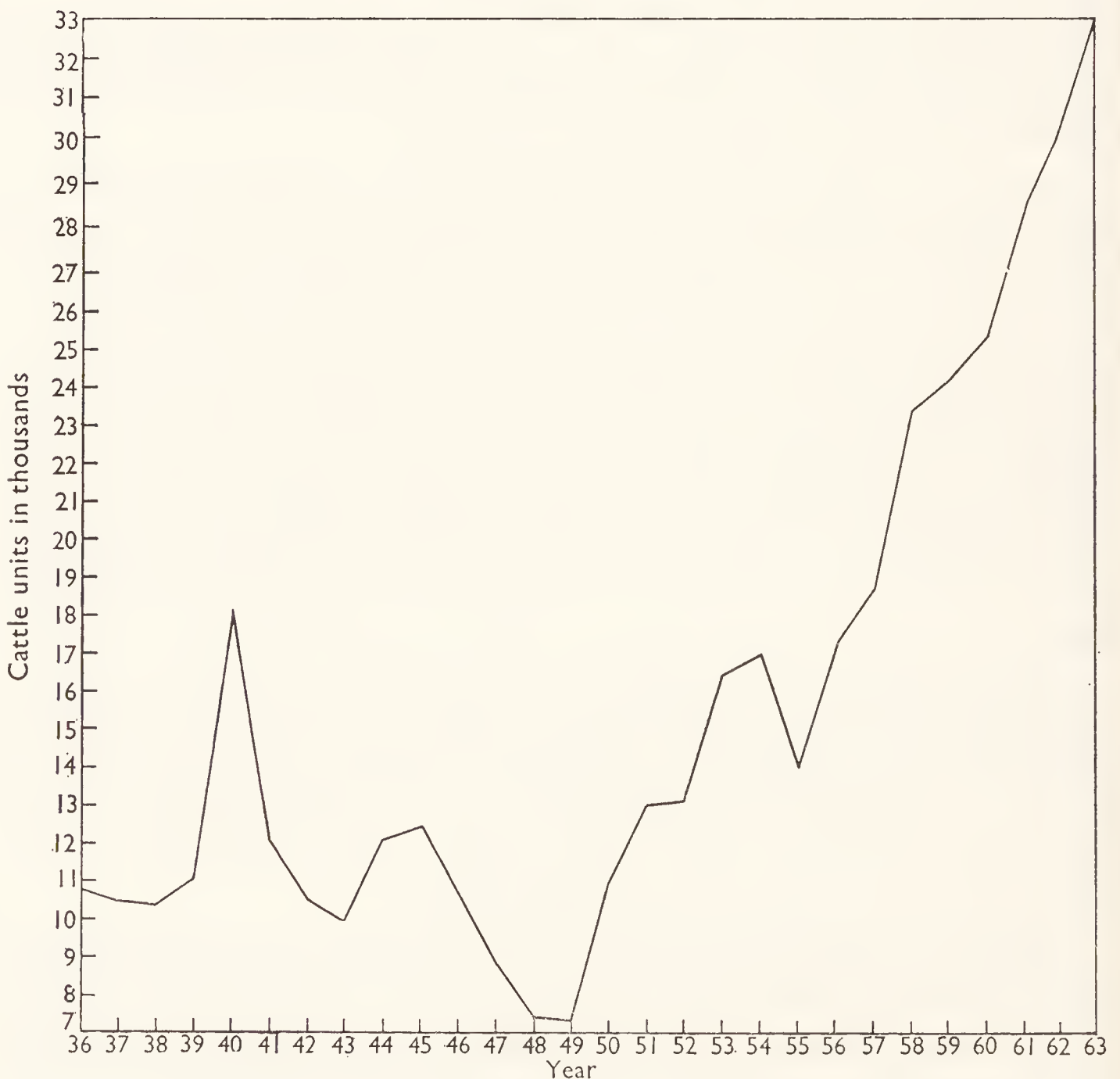
There is a licensed knacker's yard which adjoins, but is adequately separated from the horse slaughterhouse. The business is well conducted.

The total number of animals inspected was 64,768, comprising 13,255 beasts, 49 cows, 22,273 sheep, 160 calves and 28,127 pigs. This represents 32,779 cattle units. Inspectors made 2,248 visits to slaughterhouses during 1963.

The Inspectors use the Public Health Laboratory for bacteriological examinations. We are indebted to Dr. Fry (the director) for his interest and expert help. There is also close cooperation with the Department of Veterinary Medicine and other scientific bodies of the University.

The men working in the slaughterhouses have to be licensed by the Council, it being necessary to ensure that they are fit and proper persons and that humane methods are employed. Thirty licenses were held during the year and these are renewable annually.

Graph of all animals killed (shown as cattle units) from 1936



The following table shows the weight of meat condemned :—

	<i>Tons.</i>	<i>Cwts.</i>	<i>Sts.</i>	<i>Lbs.</i>
Beef	17	13	2	9
Mutton	—	15	1	6
Pork	6	4	0	0
Veal	—	2	2	12
	24	14	6	13

This table shows the percentage of carcasses, whole or in part, condemned, showing separate figures for all diseases except Tuberculosis and Cysticerci, Tuberculosis only and Cysticercosis only :—

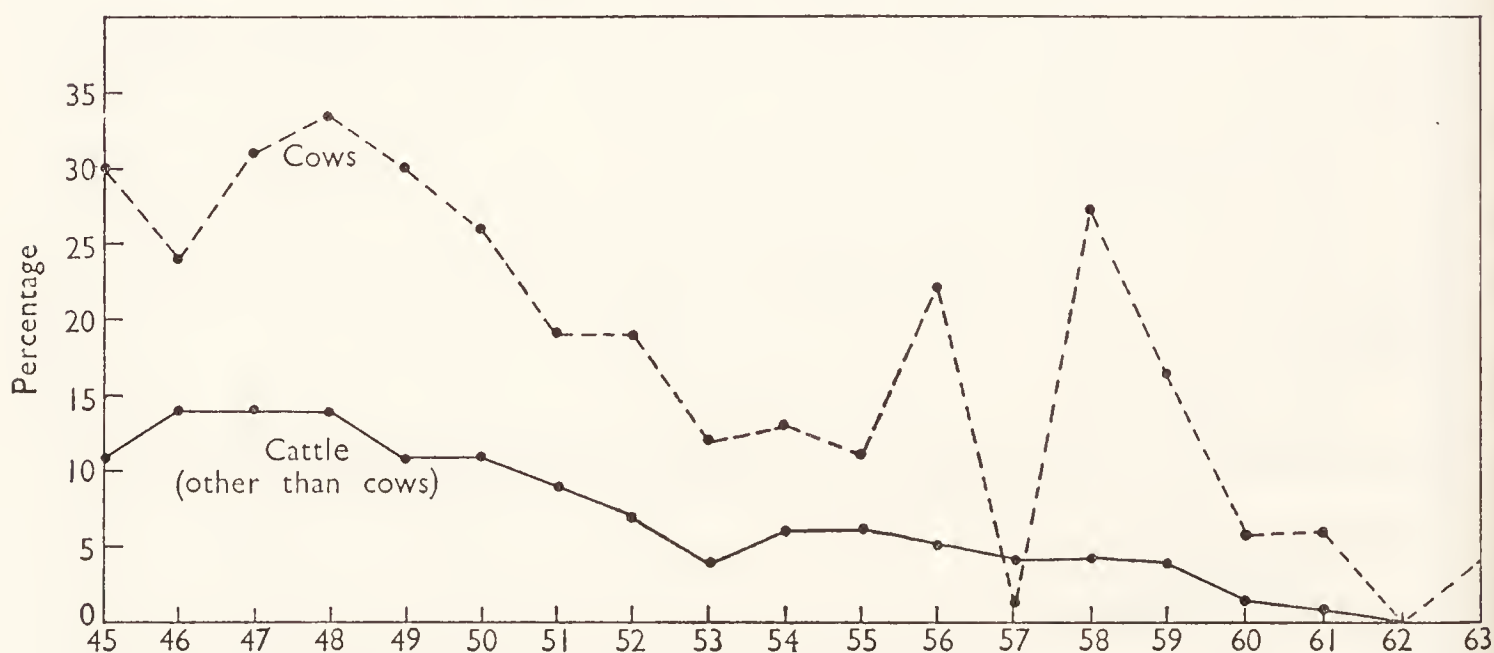
	Cattle, excluding Cows.	Cows.	Calves.	Sheep and Lambs.	Pigs.
Number killed ...	13255	49	160	22273	28127
Number inspected ...	do.	do.	do.	do.	do.
<i>All diseases except Tuberculosis and Cysticerci :</i>					
Whole carcasses con- demned ...	35	6	5	5	67
Carcasses of which some part or organ was condemned ...	871	9	8	235	1908
Percentage of the number in- spected affected with disease other than Tuberculosis and Cysticerci ...	6·8	30·6	8·1	1·1	7·0
<i>Tuberculosis only :</i>					
Whole carcasses con- demned ...	1	2	—	—	—
Carcasses of which some part or organ was con- demned ...	23	—	—	—	139
Percentage of the number in- spected affected with Tuberculosis ...	0·18	4·1	—	—	0·4
<i>Cysticercosis :</i>					
Carcasses of which some part or organ was con- demned ...	92	—	—	—	—
Carcasses submitted to the treatment by refrigeration	3	—	—	—	—
Generalised and totally con- demned ...	—	—	—	—	—

The following are the figures for recent years of cattle affected with tuberculosis :—

	Cattle (except Cows).	Cows.
1945	11.23%	29.54%
1946	13.99%	23.54%
1947	14.30%	31.07%
1948	14.11%	33.16%
1949	11.3%	30.5%
1950	11.7%	26.6%
1951	9.4%	19.1%
1952	7.9%	19.6%
1953	4.5%	11.65%
1954	6.14%	12.78%
1955	6.29%	10.69%
1956	5.2%	22.9%
1957	4.9%	1.4%
1958	4.9%	27.7%
1959	4.3%	16.2%
1960	1.8%	6.3%
1961	0.7%	7.4%
1962	0.9%	0.8%
1963	0.18%	4.1%

Tuberculosis in meat continues to decline and there is no doubt that greater economic loss is caused through parasite infestations, particularly liver fluke.

***Percentage of the Number of Cattle and Cows Inspected
Affected with Tuberculosis***



Figures for liver fluke, were as follows :—

	Cattle.	Cows only.
1949	15.5%	18.3%
1950	24.4%	16.1%
1951	20.7%	13.0%
1952	20.6%	12.1%
1953	14.7%	8.05%
1954	16.6%	7.9%
1955	28.5%	6.3%
1956	20.4%	3.8%
1957	14.25%	1.9%
1958	21.0%	9.46%
1959	28.74%	9.86%
1960	17.64%	3.8%
1961	16.0%	7.4%
1962	12.4%	4.9%
1963	13.8%	4.1%

This disease caused the loss, during the year, of 1,831 beasts' livers and parts, 2 cows' livers and parts and 121 sheeps' livers and parts.

The figures for cysticercus bovis, a parasitic disease affecting animals and human beings were as follows :—

	Cattle.	Cows only.
1949	11 cases.	
1950	28 cases.	7 cases.
1951	24 do.	6 do.
1952	41 do.	2 do.
1953	24 do.	— do.
1954	38 do.	1 do.
1955	43 do.	— do.
1956	22 do.	1 do.
1957	66 do.	— do.
1958	82 do.	1 do.
1959	53 do.	— do.
1960	57 do.	— do.
1961	31 do.	— do.
1962	31 do.	— do.
1963	92 do.	— do.

The 92 cases discovered represents 0.7% of all cattle slaughtered.

Inspection of Food other than Meat

List of Foods condemned :—

			<i>Tons.</i>	<i>Cwts.</i>	<i>Qtrs.</i>	<i>Sts.</i>	<i>Lbs.</i>
Apricots ...	...	...			2	1	8
Bacon ...	...	...		4	0	1	13
Bananas ...	...	...	1	4	1	0	0
Butter ...	...	...			2	0	2
Cakes and pies ...	...	...		2	0	0	0
Cheese ...	...	...			1	0	10½
Chinese Whole Egg	...	...			1	0	0
Corned Beef ...	...	...			1	1	0
Frozen Egg ...	...	...		1	0	1	6
Lard ...	...	...			1	1	10
Margarine ...	...	...		1	1	0	4
Potatoes ...	...	...		8	0	0	0
Prunes ...	...	...			1	0	2
Raisins ...	...	...			1	1	8
Salt ...	...	...			2	0	0
Sausages ...	...	...			2	1	8

147 tins cream ; 121 chickens ; 72 haddock grillettes ; 3 gallons Malga cream ; 480 cauliflowers ; 204 drums assorted spices ; 153 ice creams ; 116 packets cereal ; 136 packets cremolamix.

Smaller quantities of the following were also dealt with :—

Apples	Dates	Mustard
Aspic Jelly	Dessicated Coconut	Nescafe
Black Peppercorn	Figs	Orange juice
Bottled Coffee	Fish Paste	Peanut Butter
Brandy Butter	French Beans	Potato Crisps
Bread Sticks	Ham	Rice
Cake Mix	Honey	Ricory
Chicken Cutlets	Jellied Veal	Roast Pork
Chocolate	Jelly Sweets	Sauce
Cocoa	Liquid Egg	Shell Fish
Cod Fillets	Macaroni Pudding	Veal, Ham and Egg Pie
Creamed Rice	Minced Chicken	Yam Flour

Tinned Goods.

Meat	464
Fish	93
Fruit	515
Jam/Marmalade	3
Soup	66
Vegetables	425
Milk	30

Condemned food, other than rejected meat, is disposed of, under supervision, at the Council's destructor or tips. Rejected meat is stained with a green dye and either burnt in the Council's destructor, under supervision, or disposed of by the slaughter-house managers to two firms outside the City boundaries, where it is sterilised and manufactured into fertiliser.

SUPERVISION OF FOOD PREMISES

There are 914 food premises in the City and the following figures show the various trades carried out. The difference in the totals is accounted for by the fact that many places sell more than one commodity.

Bakehouses	24
Butchers' shops	96
Fish and Chips shops	23
Wet Fish dealers	21
Restaurants	76
Residential Catering Establishments	66
Retail Shops	494
Licensed Premises... ..	228
Food Manufacturers	9
Canteens	75
Dairies	9
Stalls	10
Chemists	20
Warehouses	13
Grocery	135
Greengrocery	81

Certain premises which are used for the manufacture, storage or sale of some kinds of food have to be registered with the Council under Section 16 of the Food and Drugs Act 1955. They are divided as follows :—

Manufacture and Sale of Ice Cream	2
Sale only of Ice Cream	257
Storage only of Ice Cream	2
Preparation of Sausages and Potted, Pressed or Preserved Food	94

Five new applications for the sale of ice cream were granted during the year.

Visits made to food premises numbered 2,061 and 59 notices requiring compliance with the Food Hygiene Regulations were given. There was one prosecution taken under the Regulations.

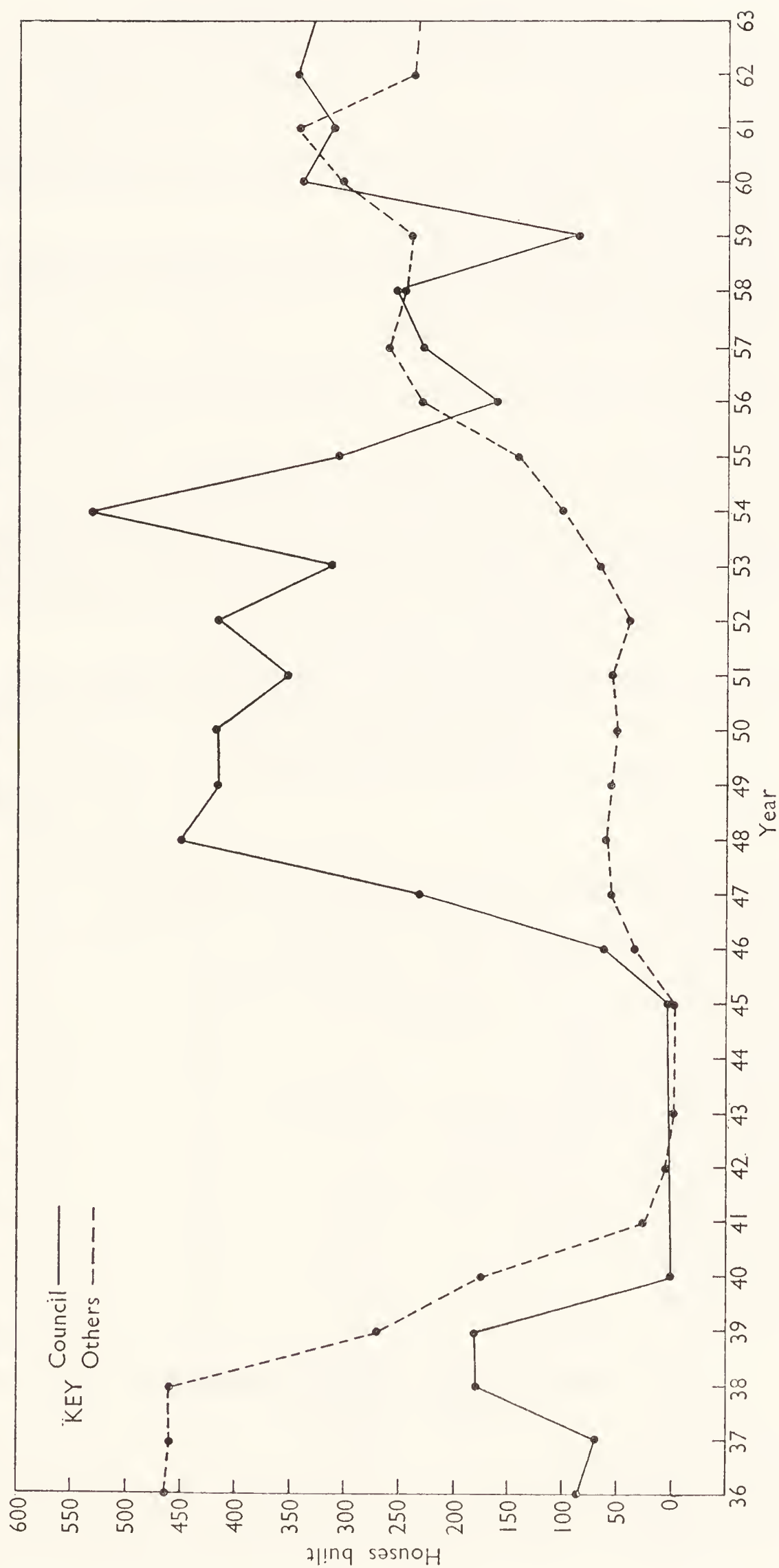
SECTION 5. HOUSING

NEW HOUSES

Houses erected by the Local Authority and private enterprise since 1919.

	Erected by the Local Authority.	Erected by Others.	Total.
1920	40	23	63
1921-1930	1226	1192	2418
1931-1940	1417	3382	4799
1941-1950	1558	279	1837
1951-1960	2970	1673	4643
1961	300	349	649
1962	356	246	602
1963	331	241	572
Totals	8198	7385	15583

NEW HOUSES ERECTED BY LOCAL AUTHORITY AND PRIVATE ENTERPRISE.



REPAIRS TO HOUSES

A fair amount of the Inspectors' time is taken up with houses which need repairing, dealing with tenants' complaints and seeing owners and builders.

242 houses were inspected during the year, 21 under the Housing Acts and 221 under the Public Health Act. Re-inspections relating to this work amounted to a total of 313.

105 houses were found to be totally unfit for human habitation. 2 were unfit for habitation owing to certain defects. 67 houses were repaired following informal action.

As a result of these visits 72 informal notices were served and 5 statutory notices. 67 notices were complied with during the year.

CLEARANCE OF HOUSES

Under Section 2 of the Housing Act 1957, supplementary proposals were submitted to the Minister. These proposals affected 3,045 houses.

Progress in Housing Clearance

Housing Act, 1957. Sections 16 and 17

(Also voluntary action)

Individual Houses

	Action taken during 1963.
Closed	19
Undertakings accepted (not to use for human habitation) ...	—
Undertakings accepted (to make houses fit)	—
Undertakings given to demolish (Circular 33/56)	64
Demolitions following Undertakings	10
Demolished (by owners)	25
Demolished by private concerns (voluntarily)	25
Demolished by Local Authority	3
Purchased by Local Authority for :—	
Temporary Accommodation	6
Demolition... ..	3
Improved out of " demolition " class... ..	5

Housing Financial Provisions Act, 1958. Section 3

Certificates of unfitness :—

Issued	5
Demolished... ..	7

Housing Act, 1957. Section 42**Clearance Area Procedure**

Post-war Clearance Areas :—

Demolished	...	...	...	...	...	...	64
Still occupied	...	...	...	...	...	...	206

Allocation of Council houses absorbed during the year 163

105 individual unfit houses were represented to the Council.

Well-maintained payments : Many owners and tenants have spent significant sums of money on admittedly unfit houses in order to keep them, as far as possible, weatherproof and comfortable. When a house is finally represented the local authority is empowered to refund a certain proportion of the proven expenditure.

During the year £3022 was approved for payment to owners and occupiers to compensate them for money spent on maintenance.

Supplementary payments : £14,208 has been approved during the year in supplementary payments.

Houses Demolished after Action by the Council

Before the year	1930	...	...	...	18
During the years	1930–1939	...	...	...	438
do.	1940–1945 (War Years)	...	...	...	36
During the year	1946	...	...	...	5
do.	1947	...	...	...	—
do.	1948	...	...	...	3
do.	1949	...	...	...	4
do.	1950	...	...	...	7
do.	1951	...	...	...	11
do.	1952	...	...	...	25
do.	1953	...	...	...	19
do.	1954	...	...	...	6
do.	1955	...	...	...	23
do.	1956	...	...	...	66
do.	1957	...	...	...	87
do.	1958	...	...	...	93
do.	1959	...	...	...	102
do.	1960	...	...	...	138
do.	1961	...	...	...	140
do.	1962	...	...	...	172
do.	1963	...	...	...	99
Total					1492

SECTION 6. OTHER MATTERS OF ENVIRONMENTAL HYGIENE

SEWERAGE AND SEWAGE DISPOSAL

The City is sewered on the "separate" system. This means two sets of pipes are provided, one for rain or "storm" water and the other for foul water. This system is adopted for inland towns where it is essential to exclude all but foul water from sewage treatment works in order to reduce volume and, incidentally costs, by ensuring that—comparatively—clean water does not overburden the works.

Both storm and foul water eventually find their way into the Cam, the storm directly and the foul via the treatment works on Milton Road. The luxury of gravity flow to the works is denied us by the flatness of the land and pumping must be done to produce the necessary head at the works. Detritus tanks and filter beds are provided and the effluent conforms to the stipulations of the Great Ouse River Board.

From time to time complaints have been received of smell from the works but with the installation of odour control equipment this nuisance has been minimised.

DRAINAGE WORK

Where complaints are received from the occupiers of houses the Council may, in certain circumstances, cleanse the drain. The cost of the work may be recovered from the owners of the premises. In practice only those drains which cannot be cleared by simple means are dealt with by the Council and as a result much time and effort is expended on what sometimes appear to be trivial matters. Until one has experienced the unpleasant reality of a blocked drain on one's garden it is difficult to realise what a serious problem this can be.

Sixty five drains involving one hundred and forty two houses were dealt with by the Health Department staff. Where excavation is required the work is referred to the City Surveyor. A total of twenty five sewers involving eighty eight houses were referred to him during 1963, the cost of the work done amounting to £381 6s. 6d.

In 1962 twenty seven instances involving ninety-seven houses were referred to the City Surveyor at a cost of £339 5s. 11d.

DISINFESTATION

Arising out of inspections or complaints, twenty Council and twenty-nine other premises were found to be infested with bed bugs, fleas, lice, cockroaches and other pests and were all treated. Where necessary, bedding and furnishings were disinfected or destroyed.

The department has continued to advise householders and trades people on how to rid their premises of insect pests and we have assisted the police in dealing with verminous persons. The Corporation Tips in Coldham's Lane have been sprayed regularly during the summer months.

From time to time we come across people who have allowed themselves, their clothing and their house to become infested with vermin.

The house we can deal with as a routine : the clothing we can treat with a little more trouble : the person always proves a problem. To disinfect persons it is essential to have regard to their health. A healthy person is not too difficult if willing to co-operate but it is unfortunately true that old and infirm people are found with head and body lice. The problem then is as much psychological as physical—a shock to the susceptibilities can be as bad as a shock to the body.

Even when there are no such complications things may not be straightforward. We always have trouble, for instance, in finding female assistance to delouse infested women. This does not happen often enough to justify a permanent member of the staff to be engaged.

Healthy men are cleaned up under the supervision of our handyman. The Public Health Committee makes an ex-gratia payment for each man disinfested as this distasteful task is quite outside the normal line of duty. During 1963 there were nine men disinfested. By arrangement with the Red Cross, one woman was disinfested.

INSPECTION OF FACTORIES

The Council is responsible for enforcing parts of the Factory Act 1937 relating to sanitary accommodation for all factories.

Where there is no mechanical power in a factory, provisions on cleanliness, overcrowding, heating and ventilation are also administered by the Council. Routine visits are made by the Public Health Inspectors and a factory register has to be kept.

Lists of outworkers or persons who do work in their homes in connection with a factory must be regularly sent to the local authority.

There are 471 factories on the register, divided into 430 power factories and 41 without mechanical power.

110 visits were made to these factories during the year and 15 visits were made to Building and Engineering works. Notices regarding defects were served in 3 cases, other matters being dealt with informally.

The following tables, which are in the form required by the Minister of Labour, give particulars of the administration of the Acts in this area.

1.—Inspections for the Purposes of Provisions as to Health

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Occupiers Prosecuted (4)
Factories with mechanical power	97	3	—
Factories without mechanical power	13	—	—
*Other premises under the Act (Not including outworkers' premises) ...	15	—	—
Total ...	125	3	—
*Electrical Stations should be reckoned as factories.			

2—Defects Found

Particulars. (1)	Number of Defects.			Number of defects in respect of which Pro- secutions were instituted. (5)
	Found. (2)	Remedied. (3)	Referred by H.M. Inspector. (4)	
Want of cleanliness (S. 1)	—	—	—	—
Overcrowding (S. 2)	—	—	—	—
Unreasonable temperatures (S. 3)	—	—	—	—
Inadequate ventilation (S. 4) ...	—	—	—	—
Ineffective drainage of floors (S. 6)	—	—	—	—
Sanitary Conveniences {	insufficient	—	—	—
	unsuitable	—	—	—
	not separate for sexes	—	—	—
Other Offences (Not including offences relating to Home Work or offences under the Sections men- tioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921, and re-enacted in the Third Schedule to the Fac- tories Act, 1937)	—	—	—	—
Total ...	—	—	—	—

3.—Outworkers

(*Factories Act, 1961, Section 133*)

Total lists received from employers during the year	...	...	51
Total lists received from other Councils during the year	...	...	8
Total lists forwarded to other Councils during the year	...	...	15
Contraventions found	...	...	—
Action taken	...	...	—

4.—Registered Factories

Factories on the Register (Section 8) at the end of the year	...	471
--	-----	-----

5.—Other Matters

Matters notified to H.M. Inspector of Factories :

Class.	Number.
Failure to affix Abstract of the Factory and Workshops Act (S. 128) ...	—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory Acts (S. 3) ...	<div> <div>Notified by H.M. Inspector ...</div> <div>Reports of action sent to H.M. Inspector ...</div> </div>
Others ...	—

COMMON LODGING HOUSES

There are two registered common lodging houses in the City.

Both are operated by professional organisations skilled in the work and no complaints were received as to their management.

The Church Army Hostel in Willow Walk is a comparatively modern building with 37 beds. There is a resident Captain who works closely with the Department of Public Health.

The White Ribbon, East Road, is a hostel operated by the Salvation Army with 37 beds. The building is old and cramped and the Salvation Army have long wished to rebuild. It was hoped to further this policy when a compulsory purchase order was made on neighbouring houses and

in 1962 a public enquiry was held. The Minister's decision was to exclude part of the area from compulsory purchase and allow the remainder. This decision reduced the area available and made it of an awkward shape. There is a shortage of accommodation for single men—these constitute a continuing problem, not only the itinerant and transient lodgers, but permanent residents. These include old-age pensioners lacking the capacity to look after themselves and also men displaced by clearance schemes from their single rooms in ordinary houses. There is a great need for a new hostel of this type.

RAG FLOCK AND OTHER FILLING MATERIALS ACT, 1951

Three premises are registered under this Act and are in a satisfactory condition.

DISEASES OF ANIMALS (WASTE FOODS) ORDER, 1957

This order places on local authorities the responsibility of inspecting and licensing waste food boiling plants. Every collector of waste foods must boil the material in a licensed plant before feeding it or redistributing it for feeding purposes. Collectors having not more than four weaned pigs or 50 head of poultry who boil waste foods for feeding on their premises to their own stock, do not need to have licences.

27 waste food boiling plants have been inspected and licensed.

RODENT CONTROL

Probably owing to the extremely severe winter of 1962/63 rat complaints arrived comparatively slowly at the start of the year.

Nevertheless, over 4,000 pre-bait takes and 2,250 poison takes were recorded during the 3,330 visits made during the year.

Rinoxin, a new type anti-coagulant poison has been given trials this year and found to be extremely successful, especially for dealing with infestations of mice.

As the previous year's records showed little evidence of rats in sewers it was not thought necessary to carry out a sewer treatment. A programme has, however, been arranged for 1964.

PART IV
WELFARE SERVICES

SECTION 1. GENERAL WELFARE SERVICES

HOME HELPS

The following table summarises the work which was done during the year.

No. of cases receiving help at beginning of period. (1)					No. of new cases during period (2)					No. of cases terminated during period. (3)					No. of cases remaining at end of period. (4)				
M	T	CS	O	T	M	T	CS	O	T	M	T	CS	O	T	M	T	CS	O	T
12	5	361	115	493	207	4	225	228	664	213	4	225	212	654	6	5	361	131	503

No. of persons receiving help during period (5)					No. of Home Helps employed (6)		No. of hours of duty performed (7)	No of cases investigated but no help given (8)				
M	T	CS	O	T	full time	part time	TOTAL	M	T	CS	O	T
219	9	586	343	1157	52	129	140339½	83	—	53	79	215

M = Maternity Case
T = Tuberculosis
CS = Chronic Sick
O = Others
T = Total

No. of patients on full rate ... 227
No. of patients on assessment ... 930
Total income ... £10,036 12s. 9d.

HEALTH VISITING

The full staff is fourteen Health Visitor/School Nurses. The number of visits paid by the Health Visitors is shown in the following table. The Health Visitors are also School Nurses and therefore only a part of their time is given to Health Visiting.

First visits to infants born in 1963	...	1566
Subsequent visits to infants	... ..	5919
Visits to children born in 1962	... ..	3190
Visits to children born in 1958/61	... ..	5290
First visits to expectant mothers	... ..	323
Subsequent visits to expectant mothers	...	109
Visits re care of the aged	... ..	1649
Visits to cases of tuberculosis	... ..	145
Visits on behalf of Addenbrooke's Hospital to homes of patients before or after admission	... ..	127
Visits to other cases	... ..	1309
*Fruitless visits	... ..	3181
		22808 (1962—22705)

*Calls at houses where no one was at home or where, for some other reason, the object of the visit could not be attained.

The Health Visitors have a good relationship with most of the general practitioners. One large group practice has regular monthly meetings with the Health Visitors on their area, while two other large group practices welcome consultations by arrangement.

The Health Visitors follow up patients discharged from Regional Hospitals as requested, particularly those from the Geriatric Unit.

HOME NURSING

Home Nursing.—The staff consists of a Superintendent and 12 full-time nurses. The Trumpington District Nurse lives at 48 High Street, Trumpington. The work done throughout the year is summarized as follows :—

The number of cases on the books at 1/1/63 ...	349	
New cases in 1963	1476	
	<hr/>	
	1825	(1962—1708)
	<hr/>	
No. of Visits paid : Medical	31783	
Surgical	9701	
Infectious Diseases ...	—	
Tuberculosis	97	
Maternal Complications	106	
*Fruitless Visits	161	
	<hr/>	
	41848	(1962—41620)
	<hr/>	

*Calls at houses where no one was at home or where, for some other reason the object of the visit could not be attained.

SECTION 2. MATERNAL AND CHILD WELFARE

MATERNITY AND MIDWIFERY

Midwives.—The Non-Medical Supervisor of Midwives is Miss A. McNiven, S.R.N., S.C.M., Q.N. who is also the Superintendent of the Home Nursing Service.

Eleven midwives gave notification of intention to practise in the City during the year.

In addition to domiciliary and private midwives, 46 midwives notified institutional practise from the Maternity Hospital (14 of these left the district during the year), and 6 from the Evelyn Nursing Home (2 of these left the district during the year).

The number of notifications received from midwives in domiciliary practise (as required by the rules of the Central Midwives' Board) is as follows :—

Notification at birth of a stillborn child	...	...	1
Notification of having laid-out a dead body	...	...	1

Municipal Midwifery Service.—There were eight full-time midwives at the end of the year. They attended 514 cases (1962–468). These cases accounted for 35.7% of the births of Cambridge residents.

The number of visits paid to midwifery cases was 9,116. The number of ante-natal visits was 6,148.

Gas and Air Analgesia was administered by the midwives in 15 cases ; Trilene in 414 cases.

Births.—The number of births in Cambridge notified during the year to parents who normally reside in the City is as follows :—

	1963.	1962.
Notified from Nursing Homes	89 (6.2%)	72 (5%)
Notified from Maternity Hospital...	809 (56.2%)	845 (59.3%)
Notified from patient's own home...	539 (37.6%)	508 (35.7%)
	<hr/> 1437 <hr/>	<hr/> 1425 <hr/>

Ante-Natal and Post-Natal Clinics.—The usual monthly ante-natal session was held at Auckland Road Clinic, and the attendances are shown in the following tables :—

<i>Total Attendances :</i>		1963.	1962.
Non-Pregnant	...	—	—
Ante-Natal	...	109	88
Post-Natal	...	2	2
		<hr/> 111 <hr/>	<hr/> 90 <hr/>

<i>Classification of Patients:</i>	<i>Brought forward from 1962.</i>	<i>New Cases in 1963.</i>	<i>Total Number who attended in the year.</i>
No. of Patients who had examinations and were found to be non-pregnant	—	—	—
No. who had ante-natal examinations only (no subsequent post - natal in 1963)	3	77	80
No. who had ante-natal examinations and returned for post-natal	1	1	2
No. who had post-natal only (no previous ante-natal)...	—	—	—
	<hr/> 4 <hr/>	<hr/> 78 <hr/>	<hr/> 82 <hr/>
	(1962)	(73)	(76)

Relaxation Exercise classes in connection with the Municipal Midwifery Service were held at Auckland Road and Romsey on Thursday afternoons, conducted by the municipal midwives. 20 courses (1962–14) were held consisting of 5 classes each, and 9–11 expectant mothers were accommodated in each class. 839 attendances were made during the year. In 1962, 670 attendances were made.

INFANT WELFARE

Premature Births.—The number of live premature births (*i.e.*, birth weight 5 lbs. 8 ozs. or less) in the cases of City residents during 1963 was 77, and the survivals at the end of one month were :—

	<i>Year of Birth.</i>		<i>Survived at end of One Month.</i>	
	1963.	1962.	1963.	1962.
Born at Home	18	13	16	12
Born in Hospital	58	69	50	52
Born in Nursing Home ...	1	1	1	1
	—	—	—	—
	77	83	67	65
	==	==	==	==

Special attention is given to this group of infants by the Health Visitors.

Infant Welfare Clinics.—Twelve infant welfare sessions were held weekly and one fortnightly in the City at ten centres. Toddler sessions, for children of 18 months to 5 years, who attended by appointment were held at five centres.

Romsey, Cherry Hinton, Auckland Road, East Barnwell and Arbury toddler sessions are by appointment once a month.

The usual activities of weighing babies, giving advice to the mothers, and selling foods were carried on at all the centres. Proprietary brands of dried milk were sold at cost price. Accessory food substances, *e.g.*, Virol, Marmite, Calcium, Iron and Vitamin Tablets were also obtainable.

In addition, the centres functioned as depots for the distribution, on behalf of the Welfare Food Distribution Centre of National Dried Milk, Cod Liver Oil, Vitamin Capsules and Orange Juice for expectant mothers and children.

Test Feeds.—During the year infant weighing machines were lent out 144 times (1962–125) to mothers, to enable them to carry out 24-hour test feeds at home.

Phenylketonuria.—Some children are born with a disorder of metabolism which quickly leads to irreversible brain damage so that they become severely subnormal mentally. Although the incidence of this state is only about 1 in 20,000 the recent introduction of a simple urine test to reveal the condition makes it worth while carrying out as a routine for, if discovered shortly after birth, suitable dietetic treatment usually prevents brain damage and enables the child to grow up mentally normal. The health visitors are now testing the urine of all babies for phenylpyruvic acid at three weeks and again at six weeks. So far we have not discovered a case of this abnormality but this, of course, is a very welcome discovery.

Congenital dislocation of the hip.—This condition, if not corrected early in life, leads to a serious abnormality in walking or necessitates the alternative of an operation and more or less lengthy period in a plaster cast. All our midwives have received instruction in early testing for congenital dislocation of the hip and they examine every child whom they deliver at the age of three days.

ATTENDANCES AT MATERNITY AND CHILD WELFARE CLINICS DURING THE YEAR 1963.

Clinic.	Day and Time. Held.	No. of Sessions held in the Year.	New Cases.		No. of Attendances.			Nos. who attended in the year, and who at the end of the year were :				Doctors Con- sul- ta- tions.
			New Cases.		No. of Attendances.			Nos. who attended in the year, and who at the end of the year were :				
			0-1	1-5	Born	Born	Born	1961/58	0-1	1-2	2-5	
			201	7	1306	1201	286				452	
Arbury Road	I.W.C. Monday	p.m.	80	8	823	656	335	251	223	270	861	
Arbury Road	Todd. Tuesday	a.m.	—	1	—	24	204				227	
		p.m.										
Auckland Road	I.W.C. Tuesday	p.m.	161	16	1398	660	73				508	
Auckland Road	Todd. Friday	p.m.	—	12	—	15	116	136	89	101	131	
Castle Street	I.W.C. Tuesday	a.m.	70	19	615	475	319	133	114	155	375	
Castle Street	I.W.C. Tuesday	p.m.	85	13	690	583	325				468	
Cherry Hinton	I.W.C. Monday	p.m.	98	6	735	760	217				439	
Cherry Hinton	Todd. Thursday	a.m.	—	2	—	19	167	154	166	221	186	
Cherry Hinton	I.W.C. Thursday	p.m.	82	5	576	577	184				458	
Chesterton	I.W.C. Thursday	p.m.	60	6	455	188	53				287	
Chesterton	Todd. Friday	p.m.	1	4	—	9	93	82	58	79	102	
East Barnwell	I.W.C. Tuesday	p.m.	116	9	1053	781	267				634	
East Barnwell	Todd. Friday	p.m.	—	2	—	48	129	100	92	146	177	
Newnham	I.W.C. Wednesday	p.m.	62	15	392	319	207	49	53	56	369	
Norwich Street	I.W.C. Wednesday	a.m.	57	4	425	294	112	41	42	31	271	
Romsey	Todd. Monday	p.m.	—	2	6	20	195				212	
Romsey	I.W.C. Wednesday	p.m.	166	13	1137	1032	163	227	202	133	729	
Romsey	I.W.C. Thursday	a.m.	49	4	424	446	162				274	
Trumpington	I.W.C. 1st & 3rd Monday in Month	p.m.	27	7	168	193	116	25	30	38	160	
			1315	155	10203	8300	3723	1198	1067	1230	7315	
			(1227)	(121)	(22191)			(1077)	(919)	(1321)	(8070)	
			(1962)	(691)	(691)							

The Chesterton Clinic opened (in April) at the St. Raphael Club, in the grounds of Chesterton Hall. This replaced the sessions previously held at the Child Guidance Clinic.

NURSERIES

Sedley Day Nursery.—This Nursery takes 40 children 0—5 years full-time, and 3 part-time. The Nursery is in the charge of a Matron (S.R.N.) with a Deputy Matron and Warden, 1 Nursery Nurse and 2 Nursery assistants. It is open Monday to Friday from 8.30 to 5.30 p.m.

A Medical Officer visits the Nursery periodically and conducts a full medical inspection of each child. During the year the Medical Officer paid 5 visits to the Nursery and 161 inspections were carried out.

The Nursery is accepted by the Ministry of Education and the Ministry of Health as a Training Centre for the training in practical work of a number of students who are taking the Nursery Nurses' Course at the Technical College. As a rule four students are under training at the Nursery.

The attendances during the year were as follows :—

			<i>Average</i>		<i>No. on</i>	<i>No. of</i>	
<i>Capacity.</i>			<i>Attendance.</i>		<i>Waiting List.</i>	<i>Attendances.</i>	
F.T. P.T.			F.T.	P.T.		F.T.	P.T.
Age 0—2	...	14	11		36	2590	
Age 2—5	...	26 3	24 2		79	5856	575

(F.T.=Full-time. P.T.=Part-time.)

Register of Private Nurseries and Daily Minders.—There were, at the end of the year 15 registered private Nurseries accommodating 309 children in all.

MATERNITY AND CHILD WELFARE DENTAL SCHEME

The following tables show the treatment provided for expectant and nursing mothers and young children during the year:

	Examined.	Needing treatment.	Treated.	Made Dentally Fit.
Expectant and Nursing mothers	104	104	104	51
*Children under five	294	294	294	200

* This does not include children in attendance at nursery classes.

	Extractions.	General Anaesthetics.	Fillings.	Scalings or Scaling and gum Treatment.	Silver Nitrate treatment.	Dressings.	Radio-graphs.	Dentures provided.	
								Com-plete	Partial.
Expectant and Nursing mothers	83	12	39	41	—	—	—	12	2
Children under five ...	100	58	139	—	95	—	—	—	—

1 repair to dentures was carried out for mothers.
The dental department has its own workshop for dentures and its own X-ray apparatus.

OTHER INFANT WELFARE SERVICES

Illegitimate Children.—A grant of £225 a year continues to be paid to the Cambridge Association for Social Welfare in virtue of their work among mothers of illegitimate children.

Child Life Protection.—The work of supervision of children 0–15 years old, boarded out for gain, is the responsibility of the Children's Committee under the Children Act, but the City Health Visitors continue to inspect and report quarterly to the Children's Officer on those foster-children who are under 5 years of age.

The number of foster-children on the register at the end of 1963 was 24 (1962—25), and the number of foster-mothers was 16 (1962—20).

Artificial Sunlight Clinics.—Ultra violet light therapy was given twice weekly at both Auckland Road and Romsey Clinics. Most of the children were referred for treatment by City Medical Officers, and a few by private practitioners.

Those children who underwent a full course of treatment appeared to be greatly benefited by it, especially in improved general tone and resistance to infection. The clinics were temporarily stopped during the summer.

The number of children treated, the attendances, and the conditions for which they were recommended, are shown in the following table :—

	<i>Auckland Road.</i>		<i>Romsey.</i>		<i>Total.</i>	
	1963	1962.	1963.	1962.	1963.	1962.
Brought forward from previous year ...	18	9	5	17	23	26
New Cases ...	22	38	5	11	27	49
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	40	47	10	28	50	75
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Of these :—						
Completed the course ...	21	24	5	21	26	45
Defaulted ...	7	5	—	2	7	7
Carried forward to next year ...	12	18	5	5	17	23
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	40	47	10	28	40	75
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<i>Number of Attendances</i>	424	569	134	265	558	834
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

Diphtheria and Whooping Cough Immunization, and Vaccination of Children under Five.—Immunization and vaccination is carried out at all Infant Welfare Clinics.

	Vacc.	Diph.	Wh. Cough	Diph. and Wh. Cough.	Diph. and Tetanus	Diph. Wh.Cough Tetanus	Tetanus
By General Practitioners	381	5	—	1	9	878	9
At Auckland Road Clinic	—	—	—	—	—	45	—
At Romsey Clinic ...	15	—	2	—	2	58	—
At Other Infant Welfare Clinics ...	80	—	—	—	6	276	5
	<u>476</u>	<u>5</u>	<u>2</u>	<u>1</u>	<u>17</u>	<u>1257</u>	<u>14</u>

Child Guidance Clinic.—No Children were referred to this clinic in 1963 (1962—2).

Speech Therapy.—10 Children were referred for speech therapy in 1963 (1962—5).

Chest Clinic.—No Patients were referred to this clinic in 1963 (1962—0).

Routine Medical Inspections at Nursery Schools.—During the year an Assistant Medical Officer carried out a number of routine medical inspections of children under five attending Nursery Schools. Numbers inspected 218 (1962—177).

Handicapped Children Under 5:—At the end of 1963 our registers contained the names of 22 mentally handicapped children and 34 physically handicapped (31 congenitally and 3 with acquired handicaps).

SECTION 3. THE SCHOOL HEALTH SERVICE

GENERAL STATISTICS FOR 1963

Number of Schools :—

Primary ...	...	...	...	...	...	22
Secondary Grammar	...	...	...	...	...	2
Secondary Modern	...	...	...	...	...	5
Special ...	...	...	...	...	...	2
Nursery ...	...	...	...	...	...	4

Number of Departments :—

Nursery ...	...	...	...	...	...	4
Primary ...	...	...	...	...	...	32
Secondary Grammar	...	...	...	...	...	4
Secondary Modern	...	...	...	...	...	9
Special ...	...	...	...	...	...	2

Number of children on registers

1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
11726	12100	12315	12585	12692	13077	13187	13287	13260	13131	13402

Average number of children in attendance

1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
10761	11390	11419	11548	11492	11695	12225	11296	11681	12044	12222

SCHOOL MEDICAL INSPECTION

The usual arrangements for routine medical inspections in this country provide for an examination shortly after a child enters school, another at the age of ten and a final one as a "leaver." In Cambridge children are examined at three-yearly intervals, so that the full range of routine medical inspection is :—

1. At nursery school (every term).
2. At primary school as entrants (in the 6th year).
3. At primary school in the 9th year.
4. At secondary school in the 12th year.
5. At secondary school as leavers (in the 15th year).
6. At grammar school if remaining beyond the statutory leaving age (17 or 18).

The ninth year examination is valuable because the child is more co-operative than as an "entrant," the teaching staff have had some experience of his life under school conditions, and his sight can be tested more satisfactorily than at an earlier age.

Under the usual system the examination at the age of 10 comes when a child is about to leave the primary school and go to the secondary school, and this has the disadvantage that any consultation about the child's future is, necessarily, with teachers who are about to relinquish charge of him. It seems very much better, therefore, to transfer this examination to one year later when the child has just entered the secondary school. Any consultation about his health at this stage is with the teacher who will have charge of him for some years to come, and, moreover, parents attending the medical inspection are brought into contact with the school staff early in the child's attendance at the new school.

We have in Cambridge, therefore, a very comprehensive system of routine medical inspection.

The details given in the numbered Tables which follow are in accordance with instructions issued by the Ministry of Education.

Part I.—Medical Inspection of Pupils attending Maintained and Assisted Primary and Secondary Schools (including Nursery and Special Schools)

Table A.—Periodic Medical Inspections

Age Groups Inspected. (By years of birth).	Number of Pupils Inspected.	Physical Condition of Pupils Inspected.			
		Satisfactory.		Unsatisfactory.	
		No.	% of Col. (2)	No.	% of Col. (2)
		(3)	(4)	(5)	(6)
1959 and later	212	211	99·5	1	0·47
1958	600	558	93·0	42	7·0
1957	450	404	89·8	46	10·2
1956	—	—	—	—	—
1955	661	634	95·9	27	4·1
1954	115	105	91·3	10	8·7
1953	—	—	—	—	—
1952	1	1	100·0	—	—
1951	658	575	87·4	83	12·6
1950	302	252	83·4	50	16·5
1949	1	1	100·0	—	—
1948 and earlier	7	7	100·0	—	—
Total	3007	2748	91·3	259	8·6

Table B.—Pupils found to Require Treatment at Periodic Medical Inspection
(excluding Dental diseases and infestation with Vermin)

Age Groups Inspected (by year of birth). (1)	For Defective vision (excluding squint). (2)	For any of the other conditions recorded in Part II. (3)	Total individual Pupils. (4)
1959 and later.	—	29	29
1958	6	119	100
1957	5	113	91
1956	—	—	—
1955	31	69	90
1954	7	16	13
1953	—	—	—
1952	—	—	—
1951	24	201	177
1950	13	104	81
1949	—	—	—
1948 and earlier	—	—	—
Total	86	651	581

Table C.—Other Inspections

Number of Special Inspections	348
Number of re-inspections... ..	1235
Total ...	1583

Table D.—Infestation with Vermin

(a) Total number of individual examinations of pupils in schools by school nurses or other authorised persons	25173
(b) Total number of individual pupils found to be infested ...	52
(c) Number of individual pupils in respect of whom cleansing notices were issued (Section 54(2), Education Act, 1944)	22
(d) Number of individual pupils in respect of whom cleansing orders were issued (Section 54(3), Education Act, 1944)	—

Part II.—Defects found by Medical Inspection during the Year
Table A.—Periodic Inspections

Defect Code No.	Defect or Disease.	PERIODIC INSPECTIONS.							
		Entrants		Leavers.		Others.		Total.	
		(T) (3)	(O) (4)	(T) (5)	(O) (6)	(T) (7)	(O) (8)	(T) (9)	(O) (10)
(1)	(2)								
4	Skin	12	19	—	—	16	13	28	322
5	Eyes—a. Vision ...	12	15	—	—	74	41	86	566
	b. Squint ...	23	13	—	—	8	11	31	244
	c. Other ...	2	6	—	—	6	13	8	199
6	Ears—a. Hearing ...	9	32	—	—	8	9	17	411
	b. Otitis Media...	1	12	—	—	1	4	2	163
	c. Other... ..	—	3	—	—	4	4	4	77
7	Nose and Throat ...	35	124	—	—	27	85	62	2093
8	Speech	22	23	—	—	9	8	31	311
9	Lymphatic Glands ...	12	37	—	—	4	29	16	663
10	Heart	1	16	—	—	11	22	12	383
11	Lungs	6	23	—	—	8	25	14	483
12	Developmental—								
	a. Hernia ...	3	1	—	—	2	2	5	33
	b. Other ...	5	14	—	—	26	18	31	321
13	Orthopaedic—								
	a. Posture ...	17	6	—	—	94	22	111	283
	b. Feet	86	19	—	—	130	21	216	403
	c. Other... ..	18	22	—	—	13	19	31	413
14	Nervous System—								
	a. Epilepsy ...	1	2	—	—	—	3	1	53
	b. Other ...	1	8	—	—	1	3	2	113
15	Psychological—								
	a. Development	—	10	—	—	—	10	—	203
	b. Stability ...	1	39	—	—	7	36	8	753
16	Abdomen	1	8	—	—	6	20	7	283
17	Other	8	24	—	—	6	30	14	543
	Total ...	276	476	—	—	461	448	737	9243

Table B.—Special Inspections

Defect Code No (1).	Defect or Disease. (2)	SPECIAL INSPECTIONS.	
		Pupils Requiring Treatment. (3)	Pupils Requiring Observation. (4)
4	Skin	6	6
5	Eyes— a Vision b Squint c Other	56 12 1	8 3 —
6	Ears— a Hearing b Otitis Media c Other	7 1 —	8 2 2
7	Nose and Throat	9	20
8	Speech	13	3
9	Lymphatic Glands	3	10
10	Heart	9	4
11	Lungs	3	6
12	Developmental— a Hernia b Other	— 7	— 4
13	Orthopaedic— a Posture b Feet c Other	22 47 2	3 2 1
14	Nervous system— a Epilepsy b Other	1 —	— 3
15	Psychological— a Development b Stability	— 5	6 6
16	Abdomen	1	1
17	Other	7	3
	Total	212	101

SUPERVISION AND TREATMENT

School Clinics

There are five sessions each week at the School Clinics : Auckland Road and Romsey (Coleridge Road). Sessions are no longer held at Cherry Hinton Hall.

Attendances at the clinics were as follows :—

Auckland Road	857
Romsey	259

Part III.—Treatment Tables

Table A.—Eye Diseases, Defective Vision and Squint

	Number of cases known to have been dealt with.	
	By the Authority.	Otherwise.
External and other, excluding errors of refraction and squint	49	—
Errors of refraction (including squint)	415	—
Total	464	—
Number of pupils for whom spectacles were prescribed	271	—

In order to avoid unnecessary referrals to the eye specialist, a medical officer on the staff screens many of the eye cases and generally supervises their progress.

Table B.—Diseases and Defects of Ear, Nose and Throat

	Number of cases known to have been treated.	
	By the Authority.	Otherwise.
Received operative treatment :—		
(a) for diseases of the ear	—	10
(b) for adenoids and chronic tonsillitis	—	140
(c) for other nose and throat conditions	—	25
Received other forms of treatment ...	—	—
Total ...	—	175
Total number of pupils in schools who are known to have been provided with hearing aids :—		
(a) in 1963	—	3
(b) in previous years	—	23

Table C.—Orthopaedic and Postural Defects

	By the Authority.	Otherwise.
Number of pupils known to have been treated at clinics or out-patient departments	446	—

Table D.—Diseases of the Skin*(excluding uncleanness for which see Table D of Part 1)*

	Number of cases treated or under treatment during the year by the Authority.
Ring-worm—(i) Scalp	—
(ii) Body	—
Scabies	4
Impetigo	3
Other skin diseases	3
Total ...	10

Table E.—Child Guidance Treatment

Number of pupils treated at Child Guidance Clinics under arrangements made by the Authority ...	146
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Table F.—Speech Therapy

Number of pupils treated by Speech Therapists under arrangements made by the Authority	252
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Table G.—Other Treatment Given

(a) Number of cases of miscellaneous minor ailments treated by the Authority	377
(b) Pupils who received convalescent treatment under School Health Service arrangements	—
(c) Pupils who received B.C.G. vaccination	862
(d) Other than (a), (b) and (c) above (specify)	
1.....	—
2.....	—
3.....	—
4.....	—
5.....	—
Total (a)–(d) ...	1239

Mentally Subnormal Children

No. of children reported to the Local Health Authority during 1963 :—

Under Section 57 (4) of the Education Act 3

Work of the School Nurses

There is an establishment for 15 School Nurses, 14 of whom are Health Visitors and so only a part of their time is given to school work. The fifteenth nurse works full time at the Roger Ascham School.

The nurses' work is shown in the following table :—

Attendances at schools.

Routine medical inspections	...	...	...	176
Personal hygiene inspections	...	...	...	214
Other school visits	...	...	...	184

Attendances at clinics.

Minor ailments and special sessions	348
Immunisation sessions	13

<i>Home Visits.</i>	732
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Artificial Sunlight

Ultra Violet Light therapy is given at Auckland Road and Romsey Clinics.

The number of children treated, and their attendances are shown in the following table :—

	Auckland Road.	Romsey.	Total.
No. of new cases	6	5	11
Cases brought forward from 1962	1	6	7
Total	7	11	18
Total number of attendances	134	146	280

SPECIAL PROVISIONS

The Roger Ascham School.—This is a special school of 120 places catering for children who, for physical or other reasons, do not fit into the ordinary school system. It is situated in Ascham Road off Milton Road. The classrooms are all separate blocks spaced out in a pleasant garden and open grounds. Children from 4 to 15 years are admitted for periods varying with their needs ; but the policy is, wherever possible, to give intensive treatment so that they may return to an ordinary school as soon as possible. Separate cloakroom and toilet facilities have now been provided for each classroom.

All children stay for lunch. Lessons are taken out of doors whenever possible, and emphasis is laid on other outdoor activities like games, dancing and gardening.

A medical officer attends for one session each week. A full-time nurse is in attendance. A remedial gymnast sees the children needing physiotherapy each morning, and the school is visited at intervals by the Orthopaedic specialist of Addenbrooke's Hospital. The speech therapists attend for five sessions each week. The physiotherapists of the Cerebral Palsy Unit (see below) also gave treatment to other children in the school.

Special transport is provided. There is no serious waiting list.

Cerebral Palsy Unit.—A special unit for the treatment and education of children suffering from cerebral palsy forms part of the Open Air School. Two full-time physiotherapists treat the children for whom there are two special classes : one for children under seven and the other for children above that age.

There are several schools of thought about methods of relieving these conditions, but we have preferred that elaborated by Dr. and Mrs. Bobath of the Western Cerebral Palsy Centre. The basic principle of this method is to accustom the child to postures which inhibit the reflexes causing his paralysis. Mrs. Bobath visits the unit periodically in an advisory capacity.

About 68 children are usually under treatment at any one time and in addition there are 12 out-patients.

Parents are encouraged to attend, and they assist the physiotherapists with the treatment of their own child and so learn methods to employ at home.

There are several advantages in having day-school arrangements for these children. Residential accommodation is hard to come by and is also expensive since each child sent away to an institution costs several hundred pounds a year to maintain. The whole unit at the Open Air School added little more to the previous cost of running the school than the cost of maintaining two or three children in a residential institution. Moreover, admission to a residential institution takes the already handicapped child away from normal life in the family and school whereas admission to our unit avoids this.

It is difficult to summarise the results we have, so far, obtained since the children differ in the initial severity of their disability and in the response to treatment. Those who visit the school regularly, however, are often surprised to see the steady improvement in a child they remember as being almost completely helpless and now find moving about freely and making social and educational progress. The parents, in particular, are pleased with the results.

A detailed written record is kept of each child's command of posture and bodily movements and the changes which take place during treatment. In addition, cinematograph films are taken at intervals and these form a valuable record from which results may be assessed.

Mongol Unit.—There is a special unit for mongols at the Roger Ascham School. Experience has shown that some of these children can so benefit from special care and training that they may even secure paid work on leaving school.

The Special School for Educationally Sub-normal Children.—The Lady Adrian School in Courtney Way has accommodation for 120 children. 20 places are reserved for children from the County area outside the City.

The age range is from 7 to 16, and intelligence quotients range from about 48% to about 80% of average. This quotient is, of course, only a guide to admission, and other factors are taken into consideration when the assessment is made. These children, who would inevitably lose their confidence by working with children of superior ability in big classes, are helped to develop to the best of their potentiality by working to their own pace in small groups where friendly relations are easier to establish. Almost all the children are subsequently able to take their place in the community, and suitable employment is found for them before they leave the school. Contact with the home is established by regular visits by a member of the Cambridgeshire Mental Welfare Association, who reports to the school and who will also keep in touch with the children after they leave the school.

Drama, painting, dancing, handicraft and cooking as means of self-expression play an important part in the life of the school and help to develop the children's ability to enjoy comradeship and group spirit. Visits in the city and further afield stimulate their interest and broaden their outlook.

The greatest benefit is derived if children can be admitted before secondary school age.

Special transport is provided.

Remedial Exercises:—The work of the Physiotherapist and the Remedial Gymnast is set out below.

School departments visited ...	...	36
Children treated :—		
Asthma ...	...	54
Foot defects ...	...	179
Postural defects ...	...	195
Breathing exercises ...	...	5
Cerebral Palsy ...	...	2
Poliomyelitis ...	...	1
		<hr/> 436 <hr/>

At the Roger Ascham School 80 children are treated.

Spastics	...	...	...	...	39
Breathing exercises	...	...	...	...	12
General Physiotherapy	...	...	...	...	11
Postural Drainage	...	...	...	...	6
Out-patient spastics	...	...	...	...	12

Handicapped Pupils.—The following table shows the provision made for various categories of handicapped pupils.

<i>Category.</i>	<i>Number on Register at end of year.</i>	<i>Number in Residential Special Schools at any time during year.</i>
Blind	5	5
Deaf	4	6
Physically Handicapped	4	5
Educationally sub-normal	2	5
Maladjusted	3	3

Speech Therapy.—The four speech therapists devote their time to the City and County Schools (under the Principal School Medical Officer of the County). The City is divided into four parts and a speech therapist works in each, treating children in the schools and at Auckland Road or Romsey Clinic according to the area. Two speech therapists attend at the Roger Ascham School every week including the Cerebral Palsy Unit. The Senior Speech therapist has received special training in the methods we employ in this Unit. One speech therapist attends the Lady Adrian School for four sessions a week.

252 children were treated during the year, the defects being :—

Dyslalia	...	...	...	...	100
Stammering	...	...	...	...	41
Sigmatism	...	...	...	...	45
Cleft palate	...	...	...	...	5
Spastic	...	...	...	...	19
Other defects	...	...	...	...	40
Deaf	...	...	...	...	2
					<hr/> 252 <hr/>

Partially Hearing Children.—There are now two special classes for children with impaired hearing. Each is attached to an ordinary school. The class at Sedley School is for children in the nursery and infant range. The class at Mayfield School is for older children. Twice a month, there is a special audiology clinic at Addenbrooke's Hospital for schoolchildren from the City and County.

SCHOOL DENTAL SERVICE

(Report of the Principal School Dental Officer, J. R. Toller, M.Sc.D., L.D.S.)

Summary of Dental Work

(1) Number of children who were :

Inspected by the Dentist :

(a) Periodic Age Groups (5 to 15)	...	...	...	...	...	...	8251
(b) Specials	...	...	...	...	...	...	1783
							<u>10034</u>

(2) Found to require treatment 6613

(3) Number referred for treatment 5856

(4) Actually treated 4432

(5) Attendances made by children for treatment 7546

(6) Half-days devoted to :

Inspection	...	...	...	...	...	...	61
Treatment	...	...	...	...	...	...	1468
							<u>1529</u>

(7) Fillings :

Permanent Teeth	...	...	...	...	...	...	5470
Temporary Teeth	...	...	...	...	...	...	1390
							<u>6860</u>

(8) Number of teeth filled :

Permanent teeth	...	...	...	...	...	...	4857
Temporary Teeth	...	...	...	...	...	...	1218
							<u>6075</u>

(9) Extractions :

Permanent Teeth	...	...	...	...	...	917
Temporary Teeth	...	...	...	...	...	2463
						<hr/> 3380 <hr/>

(10) General anaesthetic administrations 1104

(11) Orthodontics :

(a) Cases commenced during the year	...	...	...	...	16
(b) Cases carried forward from previous year	...	...	...	...	1
(c) Cases completed during the year	...	...	...	...	5
(d) Cases discontinued during the year	...	...	...	...	1
(e) Pupils treated with appliances	...	...	...	...	19
(f) Removable appliances fitted	...	...	...	...	24
(g) Fixed appliances fitted	...	...	...	...	4
(h) Total attendances	...	...	...	...	110

(12) Number of Pupils supplied with artificial dentures ... 57

(13) Other Operations :

Permanent Teeth	...	...	...	...	...	1415
Temporary Teeth	...	...	...	...	...	1567
						<hr/> 1982 <hr/>

MILK AND MEALS

Provision of Milk.—Number of bottles (one third pint) delivered to schools (excluding Special Schools) on 16th November, 1963, was 9,808.

School Meals.—The highest number of children having dinners on any day in week ended 15th November, 1963, was 7,780 of which 438 were free (as compared with a total of 7,338 of which 376 were free in week ended 17th November, 1962). Total number on free list was 507.

MISCELLANEOUS

Examination of Teachers.—During the year, 108 candidates were examined prior to entering colleges for training as teachers.

Juvenile Employment.—402 children were examined, during the year, to determine their fitness for employment.

Educational Psychologist.—The Authority's Educational Psychologist gave half his time to work in the City. He advises teachers upon problems of educational retardation and emotional disturbance. He also carries out assessments of intelligence and remedial teaching in reading.

SECTION 4. OTHER WELFARE SERVICES

WELFARE OF OLD PEOPLE

General.—The Health Visitors include care of the elderly in their normal duties and we maintain liaison with voluntary bodies such as The Cambridgeshire Old People's Welfare Council, to which the City Council makes an annual grant. Regular meetings are held of those principally concerned with the welfare of old people in the City and the County and Meals on Wheels are provided by the W.V.S.

Persons in need of care and attention.—Section 47 of the National Assistance Act, 1948, provides for legal action to be taken by the Council in certain circumstances where it appears that persons in need of care and attention should be removed to more suitable premises. No such case arose during 1963.

Chiropody Service.—An arrangement has been made with local chiropodists in private practice whereby old people, recommended by their doctor or by the Public Health Department, may receive treatment at reduced rates. Expectant mothers may also use this service. The work carried out is summarised in the following table :—

	<i>No. of patients treated.</i>	<i>No. of treatments.</i>
Male over 65	336	} 10,462
Female over 60	1,726	
Expectant Mothers	—	—
Handicapped Persons— females under 60 or males under 65	13	66
	<u>2,075</u>	<u>10,528</u>

MENTAL HEALTH

For the first part of 1963 the Cambridgeshire Mental Welfare Association continued to undertake domiciliary mental health work on behalf of the County and City Councils on an agency basis. However, in February the Association suggested that the County Council resume the work undertaken by the Association. This, in turn, meant the City Council, under its delegated health and welfare powers, undertaking domiciliary mental health work in the City through its own officers. This came about on the 1st June when the two full-time mental welfare officers engaged in the City work came on to the staff of the Health Department. It was agreed that these officers should continue to work from 19 Gloucester Street where the County Council provide office accommodation and administrative and clerical staff. In this way the County and City mental welfare officers continue to work in close contact and provide relief in each other's areas, particularly for emergency admissions to hospital.

Statistics for the year are as follows :—

Patients referred to the mental welfare officers during the year :

	Mentally ill		Subnormal		Severely Subnormal		Total		Grand Total
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
By general Practitioners ...	26	34	—	—	—	—	26	34	60
Hospitals, following in-patient treatment	6	18	1	—	—	—	7	18	25
Hospitals, following out-patient treatment ...	8	7	1	—	—	—	9	7	16
Local education authorities ...	—	—	1	—	—	—	1	—	1
Police and courts ...	3	4	—	—	—	—	3	4	7
Other sources ...	14	3	4	—	1	1	19	4	23

Of these referrals the City mental welfare officers assisted with the admission or re-admission to hospital of the following :—

Informally		Under Order		Totals		Grand Total
<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
11	24	21	25	32	49	81

Number of patients receiving care at 31/12/63 :

Mentally ill		Subnormal		Severely Subnormal		Total		Grand Total
<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
44	77	86	75	37	21	167	173	340

Of this number 43 persons (29 male, 14 female) are attending the County Council's Training Centre, 7 (1 male, 6 female) are receiving home teaching lessons, 13 (8 male, 5 female) are attending the sheltered workshop, run by the Cambridgeshire Mental Welfare Association, and the remainder are receiving home visits. In addition the mental welfare officers undertake home visits, when required, for the educationally sub-normal children attending the Lady Adrian School.

The mental health services in this area are fortunate in having considerable voluntary support. The Cambridgeshire Mental Welfare Association continues to provide an evening class in the Lady Adrian School to assist backward pupils with reading and writing ; a social therapeutic club has recently started one evening a week and is held in the Saint Raphael Club ; the Cambridge Society for Mentally Handicapped Children continues to arrange a summer camp, a social club and social activities for the mentally subnormal and severely subnormal ; the Cambridge Samaritans are doing most valuable work. Assistance is generously given by the Church Army and Salvation Army hostels and by many other of the local voluntary organisations concerned in social welfare.

THE BLIND AND PARTIALLY SIGHTED

The following tables show the work done by the three Home Teacher/Welfare officers during the year :—

	Male	Female	Total
No. on register at beginning of year ...	81	133	214
Additions to register	4	20	24
Removals from register	7	12	19
No. on register at year end	78	141	219
No. of personal visits	326	629	955
No. of lessons given	3	29	32

NATURE OF LESSONS GIVEN.

Braille ... 7	Pulpcane ... 4	Knitting ... 15
Moon ... 3	Chair Cane ... 1	Rugs ... 2

In addition to the periodic visits the Home Teacher/Welfare Officers made 123 miscellaneous visits. These included visits to the various departments of Addenbrooke's Hospital, Public Corporations, and voluntary organisations engaged in social welfare.

During the year 415 attendances were made at the Tuesday Craft Class held at Kett House and the following lessons were given :—chaircane 27, mats 27, pulpcane 239, stools 49, toys 9, weaving 26, rush 27, jewellery 11.

Liaison is maintained with the Cambridgeshire Society for the Blind (who run two residential homes and a club in the City) and the Home Teachers have given some assistance to a group of blind people who have formed a rehabilitation club.

THE PHYSICALLY HANDICAPPED

The home teachers of the blind also visited persons with physical handicaps other than deficiency of sight, hearing or speech and the following tables show the work done.

	Male.	Female.	Total.
No. on register at beginning of year ...	73	103	176
Additions to register	25	20	45
Removals from register	7	10	17
No. on register at year end	91	113	204
No. of personal visits	404	669	1073
No. of lessons given	4	30	34

NATURE OF LESSONS GIVEN

Embroidery	3	Weaving ...	1	Toys	2
Knitting ...	1	Basket Work	10	Rings	11
Pulpane ...	6				

The St. Raphael Club for physically handicapped people opened in its new premises, at Chesterton Hall, during this year. One of our Home Teacher/Welfare Officers attends every Wednesday afternoon (with an officer from the County Council) to assist at a handicraft class.

PART V

MISCELLANEOUS MATTERS

Health Education.—During the year the Chief Inspector gave a course of instruction to Boy Scouts and various members of the staff gave 10 other public and semi-public lectures. Miss Guariento, one of the Health Visitors, acted as an examiner to St. John Ambulance Brigade cadets.

Visitors to the Department.—As usual, a considerable number of people visited the department to see our work or to receive instruction. Several medical men came in connection with their studies for the Diploma in Public Health or the Diploma in Child Health or as part of their training for general practice. A number of nurses came in the course of their studies for the Health Visitor's Certificate and Addenbrooke's nurses and various nursery students received the usual courses of instruction.

The then Minister of Health, the Right Honourable Enoch Powell, spent some time at Romsey Clinic during a tour of this part of the country. Sir Alexander and Lady Ewing, of Manchester University, made another visit to instruct Health Visitors, of the City and County, in their methods of detecting deafness in very young infants.

The Cerebral Palsy Unit attracted various visitors as it has done since its inauguration and the Mongol Unit at the Roger Ascham School was visited by Miss Gordon from the Ministry of Health.

We had fewer overseas visitors than usual but they included a social worker from Yugoslavia and a doctor from Nigeria.

Ambulance Service.—An Ambulance Service is provided by Cambridgeshire County Council and the vehicles are stationed at a depot in Newmarket Road. There are 8 ambulances and 6 sitting case cars.

Mass Radiography.—The Mass Radiography Unit of the East Anglian Regional Hospital Board offered facilities for the examination of Cambridge citizens during the year.

Research Work.—We gave assistance to a number of people carrying out medical and sociological research work during the year. Dr. Moss, of the University Department of Psychology, was enquiring into the effect of heavy drinking on family life, and health visitors and district nurses endeavoured to put him into touch with suitable cases. Mrs. Naidoo, of the University Department of Education, was assisted with an enquiry (supported by the Medical Research Council) into the later effects of partial asphyxia at birth. We supplied weekly statistics of sickness to Dr. Banatvala of the Department of Pathology for use in a survey he was making.

Through our infant welfare clinics the Department of Experimental Medicine has been surveying the relationship of increased gain in weight during the first year of life and the earlier introduction of cereal feeds.

Birth weight is now frequently doubled between the ages of 3 and 4 months instead of at about 6 months as formerly. We also helped this Department with an enquiry into the incidence of breast feeding in relation to the economic and educational standards of the mother.

We continued to follow up leukaemia deaths, in which we have assisted the Oxford Survey of Childhood Cancers for the last twelve years. The speech therapists are co-operating with the Orthodontic Department of Addenbrooke's Hospital in an investigation into the relationship between speech and orthodontic defects. The Principal School Dental Officer is assisting the University Department of Genetics and the Orthodontic Department of Addenbrooke's Hospital in comparing the dental health of twins in order to determine the influence of genetic factors in dental health and disease.

In all enquiries of this kind, where confidential matters are to be examined by someone outside the department, we follow the procedure of ourselves selecting suitable children and then approaching the parents to see whether or not they are willing to participate before putting them in touch with the research worker.

For the College of General Practitioners we are collecting privet twigs taken from bushes bordering on main highways and other privet twigs from areas well away from the highways. A comparison is to be made of deposits on the leaves which may throw some light on pollution of the atmosphere by road vehicles.

Two groups of scientists—one in America and one in Australia—are claiming to have discovered that rainfall is affected by the phases of the moon. If confirmed this seems likely to cause a considerable upheaval in theories about the weather. The main effect is that there is a marked tendency towards heavy rain during the first and third weeks of the lunar month (immediately following new and full moons) and a corresponding lack of heavy rains during the other two weeks. I kept records of the rainfall in Cambridge in relation to the phases of the moon during 1963 but found no constant relationship between them.

A number of papers from the department were published in the professional press during the year.

